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THIRTY-FIFTH ANNUAL REPORT
OF THE
RAILROAD COMMISSIONERS
OF THE
STATE OF NEW HAMPSHIRE,
1879.

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1879.

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RAILROAD COMMISSIONERS' REPORT.

The railroad commissioners respectfully submit their thirty-fifth annual report.

As the present is the proper semi-centennial railroad year,* a brief retrospective survey of the origin and estab-

* The scheme of a railway traversed with steam locomotive carriages was not introduced into this or any other country, till 1829, which is known as "the great railroad year," in railway history. The importance of a smooth, hard road-bed was doubtless apparent as soon as wheel-carriages came into use. The fragments of tracks formed of stone blocks, over which the immense stones of the Egyptian pyramids were transported; the remains of the Appian Way of the ancient Romans, formed with wheel-tracks of nicely-jointed stones; the magnificent ruins of the great roads of Peru, one of them built with well-cut porphyritic stone, and another, described by Humboldt and Prescott, built of heavy flags of freestone covered in part at least with cement, which time has rendered harder than the stone itself, both the work of the ancient Incas, twenty feet wide, the latter-named scaling the Cordilleras, and nearly two thousand miles long, — all show the steps towards the railway by the civilized nations of antiquity, the device of the Appian Way being used in London, Milan, and other continental cities, in modern times. Wooden rails were first used in England as early as 1672, at the collieries near Newcastle-upon-Tyne. In 1738 iron rails were introduced on a road at Whitehaven, Eng., and in 1776 another iron railway was laid down at Sheffield, but torn up by the colliers. The first iron railway was built at the iron works of Colebrookdale in 1786. These were, in fact, roads with wooden rails strapped with iron, the straps on the last-named road being cast-iron five feet long, four inches wide, and one and three-fourths inches thick, with flanges on the outer edge to hold the wheels on the track. These roads were called tramways, a name derived, as some say, from the name of a Mr. Outram prominently identified with one of the earliest of the roads; and, as others say, from the name of the coal-wagons, which were called trams. Upon these tramways one horse could do the work of forty on a common road. An improvement of this rail, known as the fish-bellied rail from its form, long continued in use even after the introduction of the wrought-iron rolled rail, which was first used in 1808, but not brought into much use till machinery in 1820 was invented for rolling rails into other than flat

lishment of the scheme of steam-railway locomotion, which in its first half-century has produced results so stupendous

shapes. Horses and mules were almost exclusively used for the motive power down to 1829, a railway period of more than a hundred and fifty years. The only exceptions were a few roads on which the force of gravity was used on inclined planes, the descending wagons hauling back to the collieries the empty carriages, by means of ropes and windlasses.

STEAM-CARRIAGES.

Cugnot, an engineer of the French army, constructed an engine at Paris as early as 1763, and in 1769 built a steam-carriage to run on a common road at the expense of the French monarch, regarded at the time as a creditable piece of work; and in the Paris museum is preserved a steam-carriage made by him in 1790. In England Watt suggested steam-carriages in 1759, was at work on the contrivance in 1774, and patented one in 1784. Oliver Evans of Philadelphia patented a steam-carriage in 1782, sending his drawings and specifications to England in 1787 and again in 1794-95. In 1784 Murdock, Watt's assistant, built a working model of Watt's carriage. In 1802 Tremthick and Vivian patented, and in 1804 built, a high-pressure locomotive-engine for a railway in Wales, which did well with light loads on a level surface and moderate grades, but when more severely tasked the wheels slipped without advancing, a formidable obstacle to be overcome till 1831, when Horatio Allen, the ingenious engineer of the South Carolina Railroad, put into efficient operation on that road the important device of two four-wheeled trucks or bogies for engines and passenger cars, the first use of such an arrangement on any railroad, and which without essential change, including the application of pedestals to the springs, has ever since been used on all the roads in this country. Gridley Bryant, the engineer of the Quincy Granite Railway in Massachusetts, had constructed an eight-wheeled carriage for hauling long blocks of granite on his road about 1826; and Ross Winans of Baltimore, in connection with Peter Cooper, then of Baltimore, now of New York, who began experiments in view of designing a carriage which would traverse well the short curves of the Baltimore and Ohio Railroad, ultimately brought out and put upon that road substantially the same double-truck system which was already in use on Bryant's and Allen's roads. Winans obtained a patent, but failed to sustain it against Bryant's claims. There had been persistent effort in France and England, beginning as early as 1769, to establish steam-locomotive conveyance on common roads, and when the success of steam-locomotion on railroads was demonstrated in 1829 there were many steam-carriages in operation on common roads in England.

The first completely successful steam-locomotive was put into use on a railway at the Hatton colliery in England in 1823, a road changed from horse to steam power in 1819, and upon which five steam-locomotives were put into work in 1822. The machines were, however, adapted only to slow rates of speed. The first railroad in England for conveying passengers was opened in 1825, and was worked with horse-power. In 1829 Stephenson and Beeth built the Rocket for the Liverpool and Manchester Railroad, a locomotive weighing eight thousand and five hundred pounds, which ran at an average speed of fourteen miles an hour with a

and so salutary throughout the domains of civilization, seems to be not inappropriate in this place.

SEMI-CENTENNIAL SKETCH.

Fifty years ago there was no steam-locomotive upon a railroad in America. No railroad designed for steam-locomotion had then been built in this country, nor, with the solitary exception of the South Carolina Railroad, upon which work was commenced in 1829, had any railroad at that time been chartered with the use of steam-locomotion expressly in view.

Railways in a rude form, upon which to move coal by horse-power, were in use at the English collieries for nearly two centuries prior to the first English settlements in this country ; and much earnest investigation, aiming to utilize steam in propelling land-carriages, was prosecuted both in England and France as well as in this country, previous to the American Revolution, but with no practical success. About the beginning of the present century ingenious minds in England and America began to show by their contrivances that steam would ultimately be utilized as the motive power in railway transportation, though the experiments at that period were not without serious discouragements. The first completely successful experiment was on a railroad at the Hatton colliery in England in 1822, a road which had been changed from horse to steam power in 1819, and upon which five steam-locomotives, built by George Stephenson, were put into operation in 1822. The Liverpool and Manchester Railway Company, chartered in 1825, began to build the same year ; but as late as 1828 a special committee of the company reported in favor of stationary engines ; but when the road was opened in 1829, a locomotive built

gross load of seventeen tons ; and in 1830 steam-carriages were in regular operation on this road, which, when its construction was begun in 1825, was intended for stationary engines to be placed along the route. Thus was inaugurated the system of steam-locomotion, which has produced such vast results in modern civilization.

expressly for the road by Stephenson was used, attaining a speed of twenty-nine miles an hour on the trial trip, and from this success Stephenson has been styled the "Father of the Locomotive System." The earliest railway legislation in England was the charter of the "Surry Iron Tramroad,"* granted by Parliament in 1801. In the United States,

THE FIRST RAILROAD LEGISLATION AND RAILROADS

originated at a later period. The legislature of Pennsylvania on this subject incorporated a road from Philadelphia to Columbia, March 31, 1823, but the charter lapsed, as the grantees did not enter upon the work of building the road, according to the act; and in 1826 the State, in its corporate capacity, assumed the project as a portion of the stupendous undertaking in which the commonwealth that year embarked, to unite Philadelphia and Pittsburg by a continuous line of railway and canal communication, and which was finished in 1834,—comprising 122 miles of railroad and 277 miles of canal, at a cost of more than fourteen millions of dollars,—a gigantic achievement for that period, honorable to the statesmanship and courageous public spirit of that great State, in which, at the close of 1826, 6 railroads had been chartered, 28 at the close of 1830, and 39 at the close of 1831. The Baltimore and Ohio Railroad was chartered by Maryland and Virginia in 1828, and the corner-stone of the vast work was laid July 4, 1828, at Baltimore, with imposing ceremonies. Charles Carroll of Carrollton, then over ninety years of age, and the only surviving signer of the Declaration of Independence, officiated on the occasion, and in his address uttered these memorable, far-sighted words: "I consider this among the

* The origin of this name is not certain. Some derive it from the name of a man prominently engaged in mining at Newcastle,—a Mr. Outram, who about 1767 built such a road. Others claim that it originated from tram, the name of a coal-wagon, such as was used on the Newcastle road; but this wagon is, on the other hand, alleged to have received its name from Outram.

most important acts of my life, second only to my signing the Declaration of Independence." This road was completed to Wheeling, 379 miles, in 1853, at a cost of nearly twenty-four millions of dollars; and this does not embrace its branches aggregating 382 miles, making a total of 761 miles,—"main stem and branches." Maryland chartered 3 other railroads that year, and 2 in 1829. South Carolina entered early into the railroad enterprise; chartered the South Carolina Canal and Railroad Company in 1827, which in 1829 opened 6 miles of the railroad from Charleston toward the Savannah River; and in 1838 the State had chartered 12 other railroads, of which several had been completed. New York chartered the Mohawk and Hudson Railroad in 1826; it was finished in 1831, 16 miles long, the oldest railroad in the State; the motive power originally being stationary engines for heavy ascending grades, and horse-power elsewhere. It was the beginning of the New York Central and Hudson River Railroad. In 1828 there were no less than 10 railroads chartered in that State. The New York and Erie was not chartered till 1832.

RAILROADS IN NEW ENGLAND.

The first railroad legislation in New England was the charter of the Granite Railway Company, granted March 4, 1826, authorizing the building of a railroad from "the ledges of granite rock in Quincy to tide-water in Milton or Quincy," with right of way 6 rods wide, under a franchise of 40 years, Amos Lawrence being one of the grantees. The road, 3 miles long, worked by horses, was finished in 1827, the rails being wood strapped with iron, resting on granite sleepers. It was the first railroad * for actual rail-

* Thomas Leiper built an experimental railway 21 yards long, in Philadelphia, in 1800; Silas Whitney built an experimental railway on Beacon Hill, Boston, in 1807,—a gravity road on which the descending car drew another up the hill; and in 1818 there was a railway in operation with wooden rails at an iron furnace in Pennsylvania. The Mauch Chunk Railroad in Pennsylvania, 9 miles long, was

road service, of anything more than mere local note, which was put into use in this country, and was a wonder of the time. Lithographs, representing in one part a single horse moving nimbly on the railway with three of the "granite carts" coupled together, with the driver mounted on top the front cart, and in another part three horses tugging along one such cart on an ordinary highway, were printed and disseminated through the country in 1826-27; one of these pictures being now in the possession of Mr. J. B. Winslow of Boston.* This road was sold to the Old Colony Railroad Company in 1846. The work published by the State of Pennsylvania in 1876, on "Pennsylvania and the Centennial Exhibition," compiled with great research and care, states in its chapter on railroads, vol. 1, p. 237, that "a short railroad with wooden rails is said to have been built at Nashua, N. H., in 1825," but the statement does not seem to be well founded.

The second railroad act in New England was a law passed in Rhode Island in 1828, authorizing the commonwealth of Massachusetts to build a railroad from the Massachusetts line to Providence. This act was repealed in 1831, when the Providence and Boston Railroad Company was incorporated in that State. In 1829, the Massachusetts Railroad from Boston to Albany, the Boston, Providence, and Taunton, and the Worcester, a short road from Worcester to

finished in 1827, but later in the season than the completion of the Granite Railway; it was in part a gravity road, one of the descending cars bringing down the mules which hauled back the empty wagons. It is due to the Granite Railway Company to add that their enterprise, by its great success, had much influence in awakening the public mind to the railroad subject. Daniel Webster was foremost among those full in the faith in the new scheme, and his powerful support aided essentially in securing from the legislature in 1827 the appointment of two commissioners and an engineer to select and survey the most eligible route for a railroad from Boston to the Hudson River, at or near Albany. Two routes were surveyed, and, as a consequence, the legislature in 1828 devoted great attention to railroad interests throughout the State.

* This statement is derived from an excellent historical address on railroads delivered at Concord, N. H., in 1869.

Quinsegemond Pond, were chartered in Massachusetts, the Boston and Lowell, and the Franklin from Boston to the New Hampshire state line, being chartered in 1830.

The first railroad legislation in Connecticut was the charter of the Providence and Stonington Railroad, granted in 1832. This road, opened in 1837, now constitutes, by consolidation, a part of the New York, Providence, and Boston Railroad.

The first railroad legislation in Maine was the charter of the Calais Railway Company in 1832, the name being changed to the "Calais and Barring Railway Company" in 1837, and by consolidation in 1870 assuming the name of the St. Croix and Penobscot Railroad Company. The Bangor and Oldtown Railroad also was chartered in 1832, completed in 1836, and operated till the European and North American Railway was completed, over the same route, some dozen years ago. No charter was granted in Vermont till 1832, when the Rutland and Whitehall, and the Bennington and Brattleborough companies were incorporated. The earliest railroad legislation in Connecticut was the incorporation of the Boston, Norwich, and New London, and of two other companies, in 1832.

So very great was the success of the Boston and Lowell and several other roads early opened, that the building of a railroad at once became a wild fever throughout New England, in which, within a quarter of a century after the Granite Railway Company was established in 1826, no less than 281 charters were granted; 122 in Massachusetts, 49 in New Hampshire, 44 in Maine, 28 in Connecticut, 25 in Vermont, and 13 in Rhode Island.

RAILS. — WOODEN, IRON, STEEL.

The first rails used were entirely of wood. In 1672 the rails on the tramways at the English collieries were round-

ed off to fit the grooved wheels of the wagons, the track being perfectly straight. In 1765, almost a century later, the rails were still wholly of wood, but had flanges on the outer edges to hold the carriage to the track. The rails were subsequently faced with iron straps. Cast-iron rails, with smooth upper surface, on which wheels with flanges, known as "edge rails," were used, were introduced into England as early as 1789. The flange was subsequently transferred from the wheel to the rail. The "fish-bellied" rail, so called from the shape of its upper surface, was introduced in England near the beginning of the present century, and were in use for some years after the wrought-iron rail came into use in 1808. The first wrought-iron rails were flat, as it was not till 1820 that suitable machinery for rolling rails into other than flat shape was invented. This was a most important advancement, as cast-iron rails could not be made straight in greater lengths than four or five feet, while wrought-iron rails could be made straight in much greater lengths; and with the perfected machinery they can be made straight in hundred-feet lengths or more, though the usual length is from twenty to thirty feet. The first rails used on the Darlington road, the first complete railroad in the world, opened in 1825, were wrought-iron, rolled, fish-bellied, weighing twenty-eight pounds per yard.

AMERICAN IRON RAILS.

The first iron rails made in this country were cast, and used on an experimental railroad in the town of Mauch Chunk, Penn., in 1826. After casting a large quantity of them, about four feet long, the process was abandoned, being found too expensive. When the Columbia and Philadelphia Railroad Company advertised for proposals to furnish rails for their road in 1831, there were no offers to furnish American rails, and the whole were imported

from England. Prior to 1842 rails were imported virtually free of duty, and American capitalists did not dare to enter into competition with the English manufacturers; but after the passage of the tariff act of 1842, the business gradually developed in this country. The wooden stringers on the Mauch Chunk Railroad, built in 1827, were rolled straps of common flat bar-iron, an inch and a half wide and three-eighths of an inch thick. As late as 1837, iron straps, five-eighths of an inch thick, were used in building the Erie and Kalamazoo Railroad, and this kind of rail was used as late as 1850 on the Schenectady and Utica Railroad, the most important link of the New York Central.

The first T rails imported into this country were designed to be fitted into cast-iron chairs resting on stone blocks. The Boston and Lowell Road, built in 1835, used this pattern, but the chair rested on stone cross-ties instead of blocks, wooden cross-ties having come into use some years earlier. Johnson's Cyclopædia and other such authorities state that the first T rails used in this country were laid on the New Orleans and Ponchartrain Railroad in 1831. If so, they must have been of this pattern, as it is positively asserted in the American Cyclopædia that Robert L. Stevens, many years president of the Camden and Amboy Railroad, introduced the T rail on that road in 1836, and that these rails ordered from England were the first T rails produced in that country; and it is further stated that this innovation was the result of a futile effort to roll the old T rail and chair in one piece.

The manufacture of heavy iron rails in this country was begun in 1844, at the Mount Savage rolling-mill in Alleghany County, Md, erected in 1843 for the manufacture of this class of rails. The Northern Railroad of New Hampshire was in part laid originally with Mount Savage rails, and which proved to be the best iron rails ever laid upon that road, with the single exception of a purchase of

Wareham rails imported from England about the time the road was built, in 1846, the remnants of which are choicely gathered up along the track to use for frogs and other similar purposes. It may be in this connection further stated that there are some lengths of steel rail at the Danbury station, a place of the severest trial of endurance, which after ten years of the hardest use are as perfect almost as when they were laid. The Montreal rolling-mill at Danville, Penn., built in 1845 expressly for rails, manufactured there that year the first T rails made in this country. The Boston iron-works, built in 1823, rolled the first T rails made in Massachusetts, in 1846. In the same year the rolling-mill at Trenton, N. J., the rolling-mill of the New England Iron Company at Providence, the Phoenix, Penn., rolling-mill, and the Brady's Bend, Penn., rolling-mill, all began to make such rails. The rolling-mill at Brady's Bend was built in 1841 as a merchant-bar mill, and made only flat rails till 1846.

The first thirty-foot rail rolled in this country is claimed to have been rolled in 1855, at the Cambria, Penn., iron-works, but no demand was found for them at that time, the first rails of this kind made to order being rolled in 1859 at the Montour, Penn., rolling-mill, for the Sunbury and Erie Railroad Company. In 1876 the Cambria iron-works rolled 47,643 tons of iron and 56,100 tons of steel rails, — total 103,743 net tons, — which is claimed to be the largest aggregate of rails ever rolled by one mill in one year in this country.

STEEL RAIL.

The pneumatic process of converting pig-iron into steel, which has produced an entire revolution in the iron manufacture of the world, and no less a change in railroad-tracks, had its elementary beginnings scarcely more than a quarter of a century ago. Steel rails were first rolled in 1857, and, notwithstanding the great cost of them, so great

was their superiority over iron rails in endurance found to be, that the demand for them was greater than the capacity of the mills to make them, till the pneumatic process was perfected and brought into successful use two years later. William Kelly, an ingenious iron-master of Caldwell County, Ky., began experiments at his furnace in Eddyville, with the pneumatic process in view, as early as 1851, and in 1857 took out a patent in this country on a method of removing the carbon, silicon, and other impurities of pig-iron, converting it into steel by means of blasts of air forced through the molten metal, recognizing the fact that the blasts of air would raise the molten mass in the crucible from a red to a white heat, without the use of fuel. In 1855, Henry Bessemer, an engineer in England, began experiments with the same end in view, and October 17, 1855, patented a process of blowing air or steam through the molten mass, thereby decarbonizing the metal to any desired extent. Two months later he took out another patent, mainly on the fashion of a crucible, but it was not till December 12, 1856, when he secured a third patent, that he enunciated the fact that the heat developed by the currents of air was sufficient without additional fuel, though he had previously recognized that blasts of steam, instead of heating, cooled the molten metal. His patents were secured in this country as well as in England and on the Continent, but the validity of Kelly's patent in this country was established against him on the ground of priority of invention, though patented some two years later than the date of Bessemer's first patent. Neither Kelly nor Bessemer, however, succeeded in reducing the process to successful use till it was supplemented by the invention of Robert F. Mushet of the Forest steel-works in England, who in 1856 patented the process of adding to the molten pneumatized metal of the crucible a triple compound of carbon, manganese, and iron, of which compound spiegeleisen was found to be the cheapest and most convenient

form, and of which from one to five per cent only was found to be the ratio of the compound to the metal required. This device at once overcame all obstacles to the success of the process, except the great distrust among capitalists which Bessemer's continued failures had engendered in England, and which was not removed till Bessemer, in 1859, built a small converter at Sheffield, and himself put the process into so successful operation as to compel its acceptance.

While Bessemer was prosecuting his experiments in England, Kelly was persistently pursuing his experiments in this country, his experimental work being largely conducted from 1857 to 1859 inclusive, at the Cambria iron-works in Johnstown, Penn. The first pneumatic converter in America was built at this place, but no true steel was converted in it, although refined iron was very successfully produced there in those years.

In 1857, pending the publication of Mushet's patent, he built a small converter, obtained a quantity of Bessemerised* hematite cast-iron, melted it, put into it one pound of melted spiegeleisen for every twenty-two of the iron; and

* Though Kelly was undoubtedly before Bessemer in the conception of the pneumatic process, and in entering upon experiments in view of the process, Bessemer entirely surpassed him in the devising of apparatus and machinery requisite for practical success of the process, as well as in advance of him in securing patents; and it is not without a degree of justice that his name is immortalized in the name of one of the greatest inventive contributions to the industrial improvements of modern time. It is to be remembered, however, that Bessemer did not achieve success in the pneumatic process till Mushet added his improvement in 1857. While Bessemer has been crowned with fortune, and with honors which have now culminated in the honor of knighthood recently conferred on him by the Queen of England, Mushet, on the contrary, never received much pecuniary return, either in England or on the Continent, for his vital contribution to the process; but his patent in this country has been of value to him, and his invention has won him recognitions in the highest scientific circles here and in Europe. Kelly is still less known in the invention, and for the notice of him in this sketch, as also for much other information in regard to iron and steel rails, acknowledgments are due to the very valuable work on "Pennsylvania in the Centennial Exhibition," published by the "Pennsylvania Board of Centennial Managers," in 1878.

from ingots of this metal a double-headed rail was rolled at the Ebbw Vale iron-works and laid down at the Derby station on the Midland Railroad in England, where iron rails sometimes lasted no longer than three months. It was taken out in 1873, after a service of more than sixteen years, during which period about 2,250,000 trains passed over it, and a like number of detached engines and tenders. This was the first Bessemer steel rail ever laid down. In 1876, it was stated, in an address by an English engineer of eminence in London, that, while the average life of the iron rail was but about three years, most careful experiment and observation showed the average life of the Bessemer rail to be sixteen and one-half years.

The new process was at first received with more favor in Sweden than in any other country, as the unrivaled purity of the ores and fuels there furnished a pig-iron admirably adapted to the purpose. As early as 1867, there were 52 Bessemer converters in England, 22 in Prussia, 12 in France, 14 in Austria, 15 in Sweden, 2 in Belgium, and 6 in the United States, making an aggregate of 123 converters in operation in European countries. In 1873, Germany alone had 70, and England 105; and the production of Bessemer steel in England had increased from 6,000 tons in 1867 to 540,000 tons in 1874. In the United States there are now 11 Bessemer steel-works, each containing 2 converters.

In 1863, E. B. Ward, Detroit, D. J. Morrill, Johnstown, Penn., W. M. Lyon and James Park, Jr., Pittsburg, and L. S. Durfee, New Bedford, having secured control of Kelly's patent, under a contract which has been valuable to the inventor and his representatives, organized the Kelly Process Company, and established experimental works at Wyandotte, Mich. In 1864, they secured the control of Mushet's patents in this country, on terms which admitted the inventor and two other Englishmen as members of the "Kelly Process Company"; and in 1865, C. P. Chauteau,

James Harrison, and Felix Vallé, all of St. Louis, became members.

In 1864, the control of Bessemer's original process in this country was secured by John Winslow, John A. Griswold, and Alexander L. Holley, all of Troy, N. Y., in which city they constructed experimental works that year, at which they succeeded in producing Bessemer steel in 1865, as the Kelly Process Company had done at Wyandotte in 1864. But as the Wyandotte company could not achieve practical success without using the Bessemer machinery, and as the Troy company could not succeed without using the Mushet process, the two concerns were consolidated in 1866, a joint stock company under the name of the "Pneumatic Steel Association" being soon afterwards formed out of the consolidated interests. In 1867, the Pennsylvania steel-works at Harrisburg put a Bessemer converter into operation; and in 1868 a Bessemer converter was built and put into operation at Lewistown, Penn., making in all four Bessemer establishments at that time in this country.

The consolidation of the conflicting patent interests in 1866 produced a large reduction of the fees and royalties, and a consequent rapid extension of the industry through the country. The process, which after the addition of Mushet's device was exceedingly complete, has been materially improved by the enlightened chemists connected with the American work, within the sixteen years since its introduction into use in this country; and the apparatus and machinery have been vastly improved through the inventive genius of Alexander L. Holley, who has superintended the construction of the most of the American works. It is universally conceded, that, in the perfection and completeness of the constructive apparatus and working of the establishments, the United States is not surpassed by any other country; though for some cause, either the quality of the ores and metals, or the want of rigid and honest super-

vision, the average quality of the American steel rails in the market is very generally regarded in American railroad circles as inferior to that of the English. The recent heavy importation of steel rails for the Erie Railroad, by Mr. Vanderbilt, who is represented as asserting that he went for his purchase where he could get better rails than at home, is a forcible illustration in point.

The first Bessemer steel rails made in this country were rolled at the North Chicago works, May 24, 1865, from ingots made at the experimental pneumatic steel-works of Wyandotte. Several of these rails were laid in a track at Chicago, and were, after ten years' heavy wear, still in use and good condition in 1875. The first steel rails rolled in this country upon order, in the way of general business, were rolled August, 1867, at the Cambria Iron-works, Johnstown Penn., from ingots by the Pennsylvania Steel Company at Harrisburg. In September, 1867, steel rails were rolled at the Spuyten Duyvil rolling-mill, N. Y., from ingots made at the Bessemer steel-works at Troy.

Steel rails were first laid for general use in this country, upon a road in the Pennsylvania coal regions, in 1872; but were soon introduced upon the great roads and lines, and are now rapidly displacing the iron on all well-administered roads. New Hampshire in this particular is maintaining a good rank among the New England and other States of the Union. The extension of the steel tracks within this State and upon roads identified essentially with the railroad interests of this State, during the last year, in the midst of so much business depression, is a good evidence of enlightened forecast in administration. During the last year 938 tons were laid on the Northern Railroad; 500 tons on the Cheshire; 200 tons on the Boston, Concord, and Montreal; 1,700 tons on the Fitchburg; 1,600 tons on the Eastern; 498 on the Concord; and on the Boston and Maine 16½ miles, making a total of 108½ miles of steel track on that road. The introduction of steel rails on this latter-named

road, on a large scale, began in 1871, and has been continued earnestly ever since, 2,060 tons being laid in 1877.

Nor is the introduction of the steel rail on our roads the only important improvement in the interest of safety and economy in the management which challenges notice and acknowledgment. Within a few years, the Miller platform, the electric signal, the power brake, and the safety switch have all been applied to our best-appointed roads, improvements for the safety of travel and transportation heavily taxing the roads, for which the public should be grateful.

The following tabular statement, pertaining to the American production and prices of Bessemer steel and Bessemer rails since the establishment of the industry in this country, is derived from the last annual report of the "American Rail-steel Association," which is very reliable authority.

Years.	Production of Bessemer steel ingots.	Production of Bessemer steel rails since 1867, when they were first made upon orders in the United States.	Average price per ton of 2240 pounds.
	Net tons.	Net tons.	
1867	....	2,550	....
1868	...	7,225	\$158.50
1869	....	9,650	132.25
1870	....	34,000	106.75
1871	....	38,250	102.50
1872	120,108	94,070	112.00
1873	170,652	129,015	120.50
1874	191,933	144,944	94.25
1875	375,517	290,863	68.75
1876	525,996	412,461	59.25
1877	560,587	432,169	45.50
1878	732,226	550,398	42.25

EARLY RAILROAD LEGISLATION IN NEW HAMPSHIRE.

The movement for a railway line through New Hampshire was much retarded by the scheme of a water communication up the Merrimack River, thence by canal to the

Connecticut River, and across the State of Vermont to Lake Champlain. A survey of a canal route from the mouth of the White River to the lake was made under Col. J. J. Abert, chief of the corps of United States engineers, at the request of the State, as early as 1827; and at the time of the first railroad legislation in New Hampshire the canal interest was still so predominant in the State that the friends of the railroads did not in their scheme venture to give any special prominence to the transportation of merchandise.* In 1836, under the inspiration of men of forecast and wisdom in the State, and especially of Isaac Hill, then Governor, Lieut.-Col. S. H. Long, United States topographical engineer, was detailed with a corps of assistants by the secretary of war, to select and survey a railroad route entirely through the State, in view of effecting a complete railroad line from Boston to Lake Champlain, at or near Burlington. His report, dated at Hopkinton, N. H., November 26, 1836, after recognizing the part of the line from Boston to Nashua as already completed, and the part from Nashua to Concord as having been surveyed by order of the war department in 1835, proceeds to describe the portion of the route which he had surveyed from Concord to the mouth of the White River. Thence to Lake Champlain, the survey of Col. Abert in 1827, in view of a canal, was adopted as the route for a railroad. The route selected from Concord to the Connecticut was substantially that which was afterwards selected for the Northern Railroad, except the section through Boscawen and Andover, which was located up the Blackwater through Salisbury. The distance was found to be from Massachusetts State line to Concord thirty-eight miles, and thence to the Connecticut fifty-nine miles. The cost of building the New Hampshire division, ninety-seven miles, was estimated at \$20,000 per

* As late as 1850, railroads on canal routes in the State were not allowed to do transportation traffic unless they also paid the canal tolls.

mile, graded for two tracks, with one track laid; total cost, \$1,940,000. The annual earnings of the road were estimated upon passengers at four cents per mile, two hundred running days in the year, with an average of two hundred and fifty passengers daily each way, giving gross annual earnings \$288,000. The aggregate annual expenditures were estimated at \$86,000, leaving net income \$302,000, producing six per cent interest on \$5,033,333.33 $\frac{1}{3}$. The report makes no allusion at all to freight business. The price of the fare specified in this report was the lowest maximum rate fixed in any railroad charter of the time, the charter of the South Carolina Railroad in 1827 fixing the maximum at five cents.

The first railroad charter granted in this State was that of the Nashua and Lowell Railroad Company, approved June 23, 1835. This road, fourteen and one-half miles long, of which five and one-quarter miles are in New Hampshire, was chartered in Massachusetts April 16, 1836, and finished in 1838. At the next session of the legislature, June 27, 1836, three railroads were chartered in this State, the Concord, the Keene, and the Boston and Maine. Work on the Concord Railroad was begun in 1841, and the road was opened September 7, 1842. The Boston and Maine was opened February 23, 1843, but nothing was ever done under the charter of the Keene road. There was also, at the same session, in 1836, a company incorporated authorized to build a railroad at the granite quarries in Concord, under the name of the "Concord Granite and Railway Company," but nothing was done under the act towards such a road. A tabulation showing the corporate names of the railroad companies, and a statement of the line of road defined in each charter, will be found in Appendix A.

CONTROVERSY PERTAINING TO "RIGHT OF WAY."

In a few of the very earliest railroad charters in this country, the franchise was limited to a specified number of

years ; the first charter in New England, that of the Granite Railway Company of Massachusetts, being granted for forty years, the shortest period of limitation found in any railroad charter in the country. The most of the charters of even the earliest railroad period contained no such limitation, and it soon disappeared wholly from the railroad legislation. "Right of way," — authority to take land for the track, with provisions for the proper adjustment of disputes between the corporation and the land-owners as to land damages, was granted in all the charters of the country, early and late, and the propriety of such a grant was never seriously questioned in any State except New Hampshire. In this State all the charters granted prior to 1840 were substantially like those of all the rest of the country in this matter. The corporation was authorized to take the land for the road, and commissioners were appointed by the State to fix the damage, in case the corporation and the land-owner should fail to agree. But in the course of the early roads leading into this State, and especially the Boston and Maine road which did not pay much regard to the rights of the land-owner under their charter, there was much real occasion for complaint as early as 1836 ; and this feeling gradually grew into an indiscriminate hostility through the State against any chartered privilege, authorizing the taking of private property without consent of the owner. The large profits returned by the early roads, moreover, contributed to this discontent, and, under the mischievous inculcations of superficial and selfish political leaders, the sentiment soon became prevalent among the people that railroad corporations were schemes of gigantic private speculation, monopolies hostile to the interests of the people and the public welfare. In 1839 these pernicious teachings resulted in the organization of a movement to secure the unqualified repeal of the obnoxious chartered provision. It was sounded as a Democratic movement in the interests of the people against the "money power," carried into the

legislature under that banner in 1840, and triumphantly consummated ; though by far the majority of the able and best leading men of the ruling political party of the State were opposed to the measure, many of them foremost and uncompromising in the opposition. The chief champions of the measure in the legislature were Albert Baker, a respectable lawyer of Hillsborough and then chairman of the judiciary committee of the House, and Thomas P. Treadwell, an active politician of Portsmouth and also a prominent member of the House. A bill was promptly brought into the House by the latter-named gentleman for "securing land-owners the quiet and peaceable possession of their property," and June 6, 1840, passed by the legislature and approved by the governor — John Page of Haverhill. The advocates of this irrational, and, as it proved to be, pestilent and disastrous legislation, based their defense of it wholly upon the assumption that a railroad company was a private corporation, created solely for the benefit of private interests, and that to invest such corporations with the right of public way was a violation of the constitution of the State as well as an invasion of the natural rights of the citizen. The friends of the railroads, on the other hand, contended that a railroad was a work for the public convenience and welfare, entitled under the constitution, as under every other just law of conduct, to the same prerogatives as to the right of way as a common public road. Among the leaders of the Democratic party of the State at that time who were boldly against this extraordinary legislation, first and foremost was Isaac Hill, who put the best energies of his pen and his newspaper into the conflict, and never ceased his warfare, till, four years afterwards, the obnoxious law was overthrown ; also Charles H. Peaslee, John S. Wells, Samuel D. Bell, N. G. Upham, Asa P. Cate, Josiah Quincy, Lyman B. Walker, John H. White, Cyrus Barton, and John P. Hall. The superior court, consisting of Joel Parker, John J. Gilchrist, and Andrew S. Wood, was unani-

mous in sustaining the constitutionality of the provision of the old charters; and it may be added, that, when the new act was practically established in 1844, Levi Woodbury came to Concord when the subject was before the legislature, and gave his earnest and powerful influence in behalf of the wiser legislation which was then secured. The most of the able and just men in the ranks of the dominant political party, and the whole body of the minority party, opposed and denounced the measure as unreasonable and in the last degree detrimental to the interests of the State, while of those who were open and active leaders in the new scheme there were no men of recognized superiority in legislative capacity or political foresight; and that so extravagant a piece of legislation was enacted, under all these circumstances, is a striking exemplification of the folly and madness which sometimes fashion legislative works.

In 1844, the legislature found it absolutely necessary to devise some method to unload the capital and enterprise of the State of the serious incumbrance imposed by the law-makers four years previously. They devised an ingenious contrivance through which the public welfare was rescued from the mischievous act of 1840, without seeming to confess its mischievous nature. A law was enacted providing that "all railroad corporations which now are, or shall hereafter be, chartered by the authority of the State, and which shall be unable to purchase the lands for their roads of the owners on their respective routes, at rates agreed upon by the parties, are hereby made and declared to be public corporations"; and that, a road having been, under this act, laid out, and damages assessed to the owners and paid by the corporations, the State shall "lease and guaranty to said corporation, for a term not less than one hundred years nor more than two hundred years, the right to construct a railroad over said route, for the public use and benefit"; and that, "at the expiration of said term, the right so leased may be renewed"; or the State may take

the road, making "due compensation therefor." This is the substance of the "right of way procedure" which still controls in our railroad affairs.

This agitation, extending through more than four years, contributed essentially to disintegrate the dominant political party of the State, and to prepare the way for the "coalition" which in 1846 overthrew that party and brought John P. Hale into the United States Senate, in which he shed luster upon that body and upon our State for more than a quarter of a century, as an able, upright statesman, a courageous, consistent advocate of human freedom.

RAILROAD COMMISSIONERS.

The first legislation of this State in relation to the assessing of land damages in connection with railroads was an act approved June 16, 1836, providing that a board of three commissioners for each county should be appointed by the governor, to hold the office three years; and that they should, on application of any owner of land taken for a railroad, proceed to examine and estimate damages as in the case of common highways, reporting the result to the court of common pleas.

The second act, passed January 13, 1837, repeals the act of 1836, and provided that, on petition of the aggrieved land-owner, the court of common pleas for the county in which the dispute might arise should appoint a "committee" in the same manner as in case of a "committee for laying out highways," who should proceed to determine the damages as in case of highways, reporting the result to the court next to be holden in the county; and in case of dissatisfaction with the award, a provision was made for either party to call a jury.

The third act, passed June 20, 1840, repealed both the former two acts, and provided that, except in case of railroads the construction of which had been commenced before the passage of this act, no corporation should "take, use,

or occupy any lands without the consent of the owner." In an explanatory act, December 23, 1840, it was provided that, in case of controversy between land-owners and the "proprietors" of railroads begun prior to June 20, 1840, the court of the county in which the land in dispute was located should cause the damages to be assessed; and another act of the same date authorized any land-owner whose lands taken for a railroad had not been paid for prior to March 15, 1841, to fence up his land and tear up the rails, except in cases in which the corporations had made due application to the court for a committee to award damages.

The Revised Statutes, adopted December 23, 1842, made no change in the matter of securing land for railroads, and there was no need of committees or commissioners till the passage of the act, December 25, 1844, in which the legislature, retreating from the irrational and pernicious doctrine of the legislature of 1840, enacted that all railroad corporations of the State unable to purchase lands for their roads at rates agreed upon by the parties interested, should have authority to take the needed land under the sanctions and the assessments of a board of three commissioners. The act provided that a board of railroad commissioners, consisting of three, should be appointed by the governor, with advice of the council, the office of the first one appointed to be vacated at the end of one year from the second Wednesday of June, 1845; the second at the end of two years; and the third at the end of three years; the vacancies to be filled as they should regularly occur for the term of three years. In case the railroad commissioners should decide that the public good did not call for the road, the governor and council were authorized, at their discretion, to cause the railroad commissioners, in conjunction with the road commissioners of the county in which the land for the route might lay, to assess the damages in the same manner as the road commissioners acted in laying

out a highway. In an amendatory act passed June 23, 1848, the selectmen of the town were substituted in place of the county commissioners; and again, in an amendatory act passed June 25, 1851, it was provided that the board of commissioners should be elected by the legal voters, "in the same way and manner as the governor of the State is elected," and at the same time, the tenure of the office to be three years, one commissioner to be chosen each year; and this is the law still in operation, excepting a change from three to two years made by an act passed in 1877.

The duties and compensation of the commissioners are set forth in the General Laws, chap. 157, p. 375, as follows:—

SECT. 6. Said board shall perform all such duties in relation to the laying out of railroads and the determination of questions relating to railroads as may be required by law.

SECT. 7. One of said commissioners, once at least in each year, without previous notice, and whenever the governor may require it, shall make personally a full examination into the condition of the proprietors of every railroad and the management of their affairs; inspect, so far as practicable, all books, records, papers, notes, bonds, and other evidences of debt, and all titles of property, deeds, and bills of sale to such proprietors, and ascertain whether they have performed all their duties to the State and to individuals, and whether they have violated any provision of their charters, or of the laws relating to railroad corporations or to railroads.

SECT. 8. Said commissioners shall, as soon as may be, report the result of such examination to the secretary of state, who shall communicate the same in printed form to the legislature at their next session.

SECT. 9. Any railroad commissioner may examine under oath the officers, agents, or servants of such railroad proprietors, or any other person, in relation to the affairs and condition of such proprietors, and may himself administer such oath.

SECT. 10. Each commissioner shall receive for his services ten cents a mile for necessary travel each way, and three dollars for each day necessarily employed in such service, including expenses, but not including the time of traveling to and from the place of survey or examination.

SECT. 11. Such fees, and the expense of any survey or assess-

ment of damages, shall be paid by the proprietors of the railroad whose interests are in question.

SECT. 12. No stockholder, officer, or other person interested in any railroad shall be eligible as a railroad commissioner; and if any person elected to the office shall become an officer, stockholder, or interested in any railroad, he shall immediately cease to hold the office.

SPECIAL " COMMISSIONERS."

As there are, undoubtedly, but a very few persons in the State, even in railroad circles, except the corporations upon which the imposition rests, who know that such an office as that of " commissioner " pertaining to railroad affairs now exists in the State, save that of the board of railroad commissioners, and as nobody appears to see any good reason why such an office should now exist in the State, it is deemed proper to call attention to the matter. This office of *quasi* railroad commissioner first came into existence in the act of the legislature in 1838, which provided, in the consolidation of the Nashua and Lowell Railroad Company of Massachusetts with the Nashua and Lowell Railroad Company of New Hampshire, " that two commissioners shall be appointed, one by the governor of each State, to hold their offices for the term of four years and to be reasonably compensated by said company, who shall decide what portion of the expenses of said company, and of its receipts and profits, properly appertain to that part of the road lying in Massachusetts and New Hampshire respectively ; " and that " the annual report required to be made by the directors to the legislature of this State shall be approved by said commissioners."

In 1841 another troupe of these so-called commissioners found " a local habitation and a name," and this time it was a trio. When the legislature, July 2, 1841, authorized the consolidation of the Boston and Maine Railroad Company, chartered in this State in 1835, the Boston and Portland, chartered in Massachusetts in 1833, and the Maine,

New Hampshire, and Massachusetts, chartered in Maine in 1835, provision for a commissioner in each of the States concerned was introduced into the act in the exact language of the act of 1838 pertaining to the Nashua and Lowell Railroad consolidation; and in the act of 1858, authorizing the consolidation of the Peterborough and Shirley Railroad Company of New Hampshire and the Peterborough and Shirley Railroad Company of Massachusetts, the provision of the act of 1838 was again enacted, and another pair of "commissioners" was added to the useless band, the appointment in this case being for three instead of four years.

At the times of the passage of the two earlier of these three acts of consolidation, as no board of railroad commissioners had then been established in either of the three States concerned, there was some apparent, not to say real use for such commissioners; but in this State, for the last thirty-five years, the existence of such an office and officer has been a ridiculous legislative excrescence. The board of railroad commissioners in this State, created in 1844, was appointed by the executive, till, in 1851, it was made elective by the people; and if at that, or, in fact, any other time, the attention of the legislature had been called to the simply "humbug" duties * of these nondescript special commissioners, their days would have been, no doubt, promptly ended,—not perpetuated under the old system of executive appointment. If there were the slightest duty for these commissioners to do, as there is not, it should be most certainly transferred to the charge of the board of commis-

* In answer to our inquiries as to the actual services and use of this "commissioner," the office of which long ago disappeared from the Massachusetts and Maine statutes, the president of the Boston and Maine Railroad Company, after characterizing the existing office in this State as an imposition, "an unqualified humbug," concludes in this just language: "It is of no sort of consequence; serves only the purpose of compelling us to carry one man free over this road without any duties or equivalent rendered by him therefor; and your State should abolish the office."

sioners, and the office of commissioner abolished "all along the line." As an amusing commentary on this whole absurd business, it is not without pertinence to add, in relation to the duties of the commissioner under the consolidating act pertaining to the Peterborough and Shirley Railroad, that the whole concern became the exclusive property of the Fitchburg Railroad Company years ago; that in the transaction the New Hampshire division of road, with all its furniture and franchises, was "thrown in" as worthless lumber; and that the whole Peterborough and Shirley line has since been operated at an expense of some ten thousand dollars, annually, above the earnings.

RAILROAD MANAGEMENT.

In connection with this subject of railroad legislation, it is not improper or without interest, perhaps, to allude briefly to the systems of railroad management adopted in the various countries and nations, and of the practical results. In the beginning the policy of governments in relation to the construction of railroads was alike in scarcely any two countries; but the management is now narrowed substantially to two systems,—the English and the French. In France, Germany, Russia, and most other continental countries, the executive government determines the route of the road, chooses the company to build the road, or builds it itself, controls its construction and operation in all its details, everything being done by the central government, and on a systematic plan with complete uniformity. In England and in the United States, on the other hand, government is a very insignificant factor in the railroad business. It simply authorizes the construction, defines the powers of the company, and leaves everything else to the corporate and individual management and enterprise.

The outcome of these two diametrically antagonistic

systems—state control and management in France, and individual enterprise and free competition in England—is very striking, full of suggestive thought, worthy of careful consideration in this country. The two systems have worked out precisely the same result,—the division of the railroad industry among a few colossal companies; the triumph of monopoly. The construction of railroads in the two countries has been about equal in rapidity, while in the United States the mileage is five times as great as in either of the other two countries, the cost of construction being about the same in the three countries. In the United States it is well known that consolidation—the swallowing up of the poorer by richer companies—has been steadily increasing for many years, and that the result so far has been almost uniformly to cheapen as well as to improve railroad facilities. This tendency to monopoly has created alarm, to some extent, in the country, and many States have undertaken to control the fares and rates of transportation by arbitrary enactments or through boards of commissioners, on the theory that railroads are public highways controlled by corporations created by legislation, and therefore subject to the law-making power. There is also the doctrine recently set up that Congress, under the authority to regulate commerce, has full power to regulate and control railroads in all matters pertaining to their operation. What is to be the final solution of this grave controversy which is vexing the thoughts of considerate statesmen in all parts of the world, cannot be predicted. The experience in France, where monopoly was deliberately established in august form, has been so favorable that it has been proposed from influential quarters in England to enter upon the same system in that country; while at Belgium the government is actually at work transforming its system of individual enterprise into the French system. In view of these facts, which show that the freest and most enlightened nations of Europe are becoming more and more in favor of the consolidated sys-

tem, and that the tendencies to dangerous monopoly from consolidation in this country are vastly less than they would be in a country of less vastness and diversity of interest, there does not seem to be any good reason to fear that a solution of this controversy on the basis of competition will be unfavorable to the general welfare.

THROUGH RATES OF TRANSPORTATION.

It is worthy of special consideration that all our railroad corporations who do much through business from the West unite in the well-founded complaint that the rates of this class of traffic have been reduced so low as to render it doubtful whether there is any profit in continuing to do it on existing terms. The last annual report of the Northern Railroad on this point says: "The regulation of the rates on Western freight, which forms an important part of the business of our line, is not within the control of your directors. This road forms *only a small part of the long line* over which that freight passes, and if it is to accept that business it must do so on such terms as the general line may determine to be necessary in order to secure it as against competing lines." And, in conclusion, adds that after most careful exertion to reduce the management of that class of transportation into the most economical form, little or no encouragement has been realized; and that "If further effort in that direction does not bring some relief, and if means cannot be adopted to secure more remunerative terms," it will be time to consider the propriety of refusing the business on such conditions. The directors of other roads use substantially the same language. This is certainly an evidence that a more systematic union of the great railroad interests of the country is needed, under which the dealings in this matter may be so fair that the road which "forms only a small part of a long line" shall not be compelled to endure such wrong with no means

of relief. This is not an evil arising from railroad combinations, but from the very reverse.

UNIFORMITY IN ACCOUNTS. — RETURNS AND TABULATIONS.

The attention of the legislature has been repeatedly called by the board of railroad commissioners to the very great importance of a change in the time of the ending of the railroad year, and of an annual publication of accurate and systematic tabulations of the whole railroad operations of the State.

In 1858 a law was enacted requiring railroad corporations to make report to the legislature, "in the month of May, annually," of their operations, enumerating in the act "the several items" upon which the report should "contain full information"; but, unfortunately, it did not make any provision for the annual publication of the reports, or of systematic tabulations of the reports, thus required of every railroad corporation of the State. The railroad commissioners did not deem it expedient, under their discretionary powers, to embrace this important work in their annual report when the law of 1858 went into operation, and that conclusion has been perpetuated by the action of the board to the present time. The result is, that these returns, for twenty-one years, — which, if they had been annually published, in the form of enlightened and accurate tabulations, would have been of inestimable value to the vast railroad interests of the State, — have been consigned from year to year to the lumber-rooms of the state-house, contributing nothing whatever to the public intelligence. Nearly all the other States provide for the publication of their railroad returns; and it is not to be doubted that the intelligent framers of the law of 1858 in this State contemplated the annual publication of the returns, or, what would be better, full tabulations of them, required by that law. At all events, it is certain that without publication

they are of little or no account to the railroad interests. In order to make these old returns useful now, the whole accumulation must be overhauled. The whole body of facts and figures of twenty-one years must be collected and condensed into tabular statements; and this, if done in a competent manner, would furnish a history of railroad operations for that long and eventful period in the railroad business of the State of great importance. This, however, is an undertaking involving so much labor and expense, so much experience in handling statistics, and so much time, that the commissioners will not be likely ever to attempt it without specific legislative authority.

There is another defect in the law of 1858 in relation to statistical information. It fixes the end of the railroad year, and the time for the returns to be made by the railroad corporations, at the precise time when the work of collecting and tabulating those returns by the commissioners should be completed and in the hands of the printer. The law expressly requires the returns to be made in the month of May, rendering it absolutely impossible for the commissioners to properly examine them and put the information they contain into accurate and intelligible tabulations for the succeeding legislature. Under these conditions, the commissioners have been compelled to give merely a brief, unstudied summary of the financial statements. The vitally important figures of the *returns*, which are not published at all, are thus left untouched, or so meagerly and unmethodically noted as to be of no significance.

Attention is also called to the fact, that, since the enactment of the law of 1858, and the establishment of the form for the returns embraced in that law, there has been so complete a revolution in the business of constructing, equipping, operating, and maintaining railroads, that a system of returns devised so long ago, however well adapted to the time in which it was contrived, must, in the nature of things, be very inadequate to the exigencies of the present

railroad business. The importance of an annual publication of full, exact, and complete *tabulations* of the railroad *returns*, in view of the vast interests involved, cannot be overestimated. The statistical features of documents of this class constitute their chief value, and, if not presented in a systematic and intelligent form, the document is of very small consequence.

In Massachusetts, by a special act of the legislature in 1875, the railroad commissioners were required to prescribe a uniform system of keeping of the books and accounts of railroad corporations, and to employ a person skilled in the methods of railroad accounting to supervise the methods by which the accounts of such corporations are kept. In 1877 the directors of the Boston and Maine Railroad Company, in their annual report, thus speak of the results: "The system, which must be satisfactory to every honestly managed railroad corporation, has been prescribed, and went into general operation on the first day of October, 1876. We are pleased to be able to say that we believe it is as perfect a system as can be devised, and is similar to that used by this corporation for the past fifteen years." The importance of uniformity of method in the different States interlaced by railroads partly in one State and partly in another, is no less vitally important than uniformity of method in the different corporations of the same State, and the railroad commissioners of the various States have been making persistent exertions for some years to bring the States to the adoption of so desirable an accounting system. This matter is again urged upon the attention of the legislature of this State.

THE POWERS AND THE MODE OF ELECTING THE COMMISSIONERS.

It is well known that the powers and duties of the board of railroad commissioners are so limited and so indefinitely defined, that the whole business of the organization is of

very little real account, though the magnitude of the industry to which the commission appertains is vast and momentous to the welfare of the commonwealth. "The propriety of enlarging and more specifically defining the powers and duties of the commissioners," of investing the board with authority and responsibility to render the maintenance of the office a real benefit to the State, as is the case in all other of the more enlightened States, is urged with earnestness upon the consideration of the legislature. It is certain that in these suggestions we but give expression to the convictions of all who have ever served on this board, and of all who are conversant with the matter. The board in its annual report last year on this subject said: "At present, the only active duties required of the board are to act as referees in conjunction with the selectmen of the town in awarding land damages when the land-owners and company fail to agree on a settlement, and to make an examination of the accounts and financial affairs of the several roads doing business in the State, and to make report of the same. It is for you to consider whether these are all the duties which shall be required of the commissioners, or if there are not other matters of equal or greater importance pertaining to railroads and their management which might properly come before them and make a part of their duty."

In relation to the mode of electing the members of the board, if it is to have any important work to do, the wisdom of so changing the law as to make the board perpetual, by providing that one member shall be elected annually for the term of three years, is too obvious to need comment.

During the year there has been an addition of 49 miles to the aggregate length of railroads in operation in the State,—the section of the Manchester and Keene road from Manchester to Keene, 29.55 miles; the Whitefield and Jefferson road, 10 miles; and the Profile and Franconia narrow-gauge road 10 miles,—making an aggregate of 1,006.09 miles now in operation in the State.

The opening of the Profile and Franconia road is notable as the first attempt to introduce the narrow-gauge system into our State. The enterprise has been well executed, and promises to give the system a favorable introduction into our commonwealth.

The following statistics may not be without interest and propriety in this connection: In 1878 there were about 3,066 miles of narrow-gauge railroad in operation in the United States, of which about 2,675 miles were 3-foot gauge, 350 miles 3 feet 6 inches, and the residue of various widths, the narrowest being the Billerica and Bedford, in Massachusetts, 8.63 miles long of 2-foot gauge. In New England there are but 59 miles in operation, — 34 miles in Massachusetts, 15 in Maine, and 10 in New Hampshire. The longest narrow-gauge road (3 feet) in this country is the Denver and Rio Grande, of Colorado, 893 miles, of which 307 miles were in operation in 1878, and the remainder under construction. The states and territories having 50 miles or more of this class of railroads in operation are as follows: Pennsylvania, 294 miles; Ohio, 330; Illinois, 231; Indiana, 93; Texas, 142; Georgia, 85; Iowa, 134; Kansas, 84; Tennessee, 52; Mississippi, 66; Arkansas, 73; North Carolina, 61; Washington Territory, 55; Nevada, 127; Utah, 172; Colorado, 371; Wisconsin, 66; New Jersey, 58; California, 195. In the Dominion of Canada there were in operation, in 1878, 5 roads of 3 feet 6 inches gauge, 655 miles, not including Manitoba, the Northwest Territory, and British Columbia. In Pennsylvania there are 16 narrow-gauge roads, 14 in Ohio, 9 in California, and 6 each in Massachusetts, Utah, and Texas. While in this country the 3-foot gauge is generally adopted, in some European countries the gauge is 3 feet 6 inches, and that of the East Indian roads is 3 feet $3\frac{1}{2}$ inches. The rail ranges from 24 to 52 pounds, that of the great Colorado line ranging from 30 to 35 pounds, a large portion steel.

No attempt to present any systematic tabulation of the

railroad business of the State has been made in this report, as such statistical work is impossible under the existing railroad statutes, which make the railroad year of the New Hampshire portion of so many of our important roads end in March, while the portion running into adjacent States ends in September, and brings the termination of our year at the precise time when the paramount statistical work requiring the most careful labor should all have been completed and in print. A few important tables pertaining to the work will be found in connection with the details of the various roads, and several important tabulations will also be found in the appendix, to which attention is directed.

In the gathering of the historical information, essential assistance has been received through Col. John H. George, and Mr. William A. Crafts, secretary of the board of railroad commissioners of Massachusetts,—the interesting historical discourse on railroad matters, delivered in Concord by Col. George, deserving special mention.

The very great loss to the railroad business of New England, and especially to this State, produced by the death of Onslow Stearns, who had, from the foundation of the railway enterprises of the State, been a foremost leader, able, upright, and wise, and an influential, public-spirited, and good man in every relation of life, is fully known and deeply felt by the whole State. Some brief notice of his life and services will be found elsewhere in this report in connection with the notice of the Northern Railroad, of which he was, from its first inception to the day of his death, so sagacious and so true a counselor and guide.

The board of commissioners, in the prosecution of the duties of their office, have been impressed with the highest respect for the business energy, foresight, and courage, as well as the honorable and just ideas which have perpetually been disclosed in their examinations of the books and transactions of the corporations, and in their intercourse with

the men who are so devotedly giving their best powers to uphold this colossal industrial work of the State.

CONCLUSION.

The railroad interests of the State, notwithstanding the continued depression of business in the country, are, on the whole, in as encouraging a condition as they were a year ago. No severe accidents or calamities have occurred on any of our roads during the year ; and in relation to several embarrassed roads, very much within the year, notably in the case of the Eastern road, has been accomplished toward their effectual rescue from financial troubles and disasters. We think the management of the railroad operations identified with this State compares favorably in its wisdom and success with that of Massachusetts or that of any other State system.

WILLIAM A. PEIRCE,
GRANVILLE P. CONN,
DAVID E. WILLARD,
Commissioners.

STATEMENT
OF THE
FINANCIAL CONDITION OF RAILROADS
IN NEW HAMPSHIRE.

CONCORD RAILROAD.

Line of Road.—Concord to Nashua, double track, 35 miles. Branch: Concord to Hooksett, 7 miles. Leased: Concord and Portsmouth Railroad, 40.5 miles; Manchester and North Weare Railroad, 19 miles; Suncook Valley Railroad, 20 miles; Nashua, Acton, and Boston Railroad, Nashua to North Acton, Mass., 20.21 miles, of which 4.75 miles are in New Hampshire. Total length roads operated by the company, 141.71 miles, of which 126.25 miles are in New Hampshire.

This road was chartered June 27, 1835,—the second road chartered by the legislature of this State, the Nashua and Lowell road having been chartered four days previously, June 23, 1835. The construction of the road was begun in 1841, and completed in 1842. In 1870, the company leased for forty-two years the Suncook Valley road, extending from Suncook to Pittsfield, a distance of 17.5 miles, the lessees paying an annual rental of \$14,000, and \$300 to defray the expenses of the lessors in maintaining an independent organization. The capital stock represent-

ing the cost of the Suncook Valley road is \$341,700, of which \$200,000 is guaranteed stock on which a dividend of six per cent is annually paid from the rent, the residue of the rent going to the proprietors of the common stock.

In September, 1858, the Concord Railroad Company leased the Concord and Portsmouth Railroad, extending from Portsmouth to Manchester, for five years, at an annual rental of \$15,000, the lessees to pay \$500 annually to maintain the independent organization of the lessors, and to expend annually \$2,500 on the track. In 1861, however, a new lease was substituted for a term of ninety-nine years, and, by due notice served upon the lessors five years before its expiration, may be continued another similar term. The lessees are obligated to pay an annual rental of \$25,000, and to maintain the road in good condition. The lease of the Nashua, Acton, and Boston Railroad was confirmed by the contracting companies in 1876, and this is the third year of its operations under the Concord company. The arrangement has proved thus far quite as advantageous to the lessees as was anticipated. The lease is for ten years from 1876, at an annual rental of \$11,000, the lessees purchasing the rolling-stock and furniture of the leased road for \$70,000.

The Concord Railroad, with its leased roads, is now the heaviest railroad interest within the State, being second to the Boston, Concord, and Montreal Railroad alone in length of line. It is well managed. The gross receipts for the year ending March 31, 1877, were about ten per cent less than the passenger and seven per cent less in the freight department than in the previous year, a falling off of about \$79,000; while the reduction in expenses was fourteen per cent, or about \$98,000;—about \$9,000 increase in the net earnings for the year. The annual report of the corporation for that year says,—“Owing to the large reduction in freight rates made by the new tariff, which has just gone into effect, and to the increased claim

made by the lower roads for haulage, the future earnings of the road will be much diminished, and probably they will be insufficient to continue the present rate of dividends to the stockholders, unless there shall be an increase of business to compensate for that loss." By prudent management, however, notwithstanding the continued depression of business, the rate of dividends has been maintained, without any failure to support the road in all its departments in the same first-class condition which it has so long held. During the last year, 573 tons of new iron rails and 498 tons of new steel rails have been purchased and placed in the track, 898 tons of iron rails have been taken up, repaired, and relaid, on side roads, 3,584 feet of new and additional side tracks have been laid, and 83,673 new sleepers placed in the track.

FINANCIAL STATEMENT.

TREASURER'S TRIAL-BALANCE, MARCH 31, 1879.			
DR.		CR.	
Construction,	\$1,500,000.00	Capital stock,	\$1,500,000.00
Rindge's wharf,	51,507.72	Det. and contingent,	153,226.06
Manchester and North Weare		Notes payable,	42,936.22
Railroad,	11,534.19	Interest,	58,086.70
Notes receivable,	63,611.02	Concord Railroad dividend,	
Mount Washington Railroad,	173.61	May 1,	75,000.00
Suncook Valley Railroad,	126,965.10	Concord Railroad old div.,	2,341.50
Cash on hand,	78,184.34	Suncook Valley Railroad div.,	102.00
		Concord and Portsmouth R.	
		R. dividend,	189.00
		Concord and Portsmouth R.	
		R. old dividend,	94.50
	<u>\$1,831,975.98</u>		<u>\$1,831,975.98</u>

Receipts.

From passengers,	\$278,321.01
freight,	424,954.68
rents,	3,862.73
express,	13,750.02
mails,	12,115.76
Total gross earnings,	\$733,004.20

Expenditures.

Total expenditures,	\$414,157.11
Leaving a balance of	\$318,847.09
From which has been paid : —	
Taxes on capital stock,	\$35,465.28
Manchester and Lawrence R. R.,	69,962.41
Rent of Concord and Portsmouth Railroad,	25,000.00
Rent of Suncook Valley Railroad,	8,094.00
Rent of Nashua, Acton, and Boston Railroad,	11,000.00
On account of Nashua, Acton, and Boston rolling-stock,	18,707.68
	\$168,229.37
Leaving the sum of	\$150,617.72
From this has been paid : —	
Two dividends, of five per cent each,	150,000.00
Balance carried to contingent fund,	\$617.72

SUMMARY EXHIBIT LAST TEN YEARS.

Fiscal Years.	Receipts.	Expenditures.	Net Earnings.	Dividend.	Per cent
1869-70..	\$855,322.00	\$701,378.00	\$153,944.00	\$150,000	10
1870-71..	925,000.00	772,912.00	152,088.00	150,000	10
1871-72..	996,224.00	571,359.00	424,865.00	150,000	10
1872-73..	1,040,115.00	688,226.00	351,888.00	150,000	10
1873-74..	1,041,439.00	736,697.00	304,742.00	150,000	10
1874-75..	1,002,951.00	692,046.00	310,904.00	150,000	10
1875-76..	950,358.00	675,060.00	275,298.00	150,000	10
1876-77..	871,528.08	576,766.75	294,761.33	150,000	10
1877-78..	771,171.58	430,717.65	340,453.93	150,000	10
1878-79..	733,004.20	414,157.11	318,847.09	150,000	10

In the death of Hon. Onslow Stearns, who died at his home in Concord, December 29, 1878, the State, which had honored him with its chief executive office, as well as this corporation of which he was president at his death, experi-

enced a very great loss. He was confessedly one of the very ablest men in his vocation in New England, and a true man in every relation in life. The board of directors at a meeting January 10, 1879, unanimously adopted the following resolution : —

Resolved, That the members of this board express their deep regret at the death of their president and associate, — Hon. Onslow Stearns, — and place upon the record their appreciation of the courtesy which characterized his official relations, and their high respect for the integrity, fidelity, and signal success with which he performed the many important duties intrusted to his charge.

OFFICERS.

President. — Josiah Minot, Concord.

Treasurer. — Nathan Parker, Manchester.

Superintendent. — H. E. Chamberlin, Concord.

Directors. — Frederick Smyth, Manchester ; Samuel N. Bell, Manchester ; J. Thomas Vose, Boston ; Benjamin A. Kimball, Concord ; Josiah Minot, Concord ; Dexter Richards, Newport.

CONCORD AND PORTSMOUTH RAILROAD.

Line of Road. — Portsmouth to Manchester. Length, 41 miles.

The Portsmouth, Newmarket, and Concord Railroad, authorized to construct a railroad from “some point in Portsmouth, or on the Boston and Maine Railroad in Dover, Durham, Newmarket, or Exeter . . . to Concord or Manchester . . . or some point on the Concord Railroad between Manchester and Concord ;” and the Portsmouth, Newmarket, and Exeter Railroad, authorized to construct a railroad from Portsmouth to “some point on the Boston and Maine Railroad in Dover, Newmarket, or Exeter,” both corporations being chartered on the same day, — July

1, 1845,—were empowered in their respective charters “to unite and form one company,” the corporate title, of the latter-named corporation, in such union, to be changed into that of the former-named corporation, and that of the former-named to be changed to that of the Portsmouth and Concord Railroad. The two companies were thus united, according to the terms of the two charters, in the latter part of 1845. An additional act, July 10, 1846, authorized the company to extend their line from Allentown or Pembroke to the Concord road in Hooksett; and June 23, 1848, another act authorized them to extend that line from Raymond, Candia, or Hooksett, to Manchester; and thus the route from Portsmouth, by way of Newmarket, Raymond, and Manchester, to the Concord Railroad in Hooksett, was chartered. In 1850, at the expiration of the time specified in the charter for the completion of the road, the time was extended to 1853; the name of the road, “turned end for end” in the extension act, took its present title of the Concord and Portsmouth Railroad. The construction of the road was begun in 1851 and completed in 1852. In 1857 the old corporation, under authority of a special act of the legislature, for the purpose of reconciling and adjusting the various conflicting interests involved in the ownership of the road and equipment, sold the entire property and franchises of the corporation, the purchasers being mainly individual members of the old company, who organized themselves into a new company under the present corporate title. In 1858 the road was leased to the Concord Railroad Company for 5 years, at an annual rental of 6 per cent on its capital stock of \$250,000,—the lessees to pay also \$500 annually to maintain an independent organization of the lessors, and to expend at least \$2,500 annually on the track of the leased road. In 1861, however, this contract was surrendered, and a new lease was executed to continue for the term of 99 years, the lessees to pay an annual rental of \$25,000, and furnish all needed equipment. By

due notice, 5 years before the expiration of the present lease, served by the lessees upon the lessors, the lease may be confirmed for another similar term. The capital stock of the new company is fixed at \$350,000, on which a semi-annual dividend of $3\frac{1}{2}$ per cent is regularly paid from the rent. It is understood that this is one of the most remunerative roads, in its operations, in New England; but, as its business is reported by the lessees in the general account of their operations, the earnings, expenditures, and net income cannot be given in this report.

OFFICERS.

President. — Stephen Kenrick.

Treasurer. — Moody Currier.

Directors. — S. N. Bell, Benjamin F. Martin. J. B. Walker, Nathan Parker, John J. Pickering, and John J. Bell.

SUNCOOK VALLEY RAILROAD.

Line of Road. — Pittsfield to Suncook village. Length, 18 miles.

This company was originally chartered January 4, 1849, with authority to build a road from Hooksett, Allentown, or Pembroke to Pittsfield, but the charter lapsed and the scheme rested for a dozen years. A new charter, July 1, 1863, was obtained, authorizing the construction of a road from Pittsfield to a point on the Concord and Portsmouth Railroad, at or near Suncook village, in Allentown, or Pembroke, but construction was not begun till 1868, the road being opened in 1869. The road was built under an arrangement with the Concord Railroad Corporation and the Manchester and Lawrence Railroad, that the two latter-named companies were to take a long lease of the new road, on its completion, at an annual rental of six per cent on its capital stock. In pursuance of this under-

standing, the road was leased to the two companies January 1, 1870, for the term of forty-two years from that date. The capital stock consisted then, as it now does, of 3,451 shares of \$100 each, — a total of \$345,100. Of this stock, 2,400 shares — \$240,000 — were taken by individuals, and of the remaining 1,051 shares — \$105,100 — three-fifths were taken by the Concord Railroad Corporation and two-fifths by the Manchester and Lawrence Railroad, and, with the exception of the sale of some five shares held by the Concord Railroad Corporation, there has been no change in the amount of stock owned by the two companies since the lease was executed. In the construction of the road, gratuities were contributed very liberally by the towns specially interested on the route as follows: Manchester, \$50,000; Pittsfield, \$31,000; Epsom, \$17,700; Pittsfield Manufacturing Company, \$3,000; also various individual gratuities amounting to some \$8,000; — an aggregate contribution of \$109,700. The total cost of constructing the road, therefore, was \$454,800. The operations of the leased road are merged in the accounts of the Concord Railroad Corporation, no separate books being kept for the leased road. The Suncook Valley Company maintains an independent organization, but has no duties but to receive the annual dividends of six per cent on the stock, \$240,000, owned outside the two lessee companies — \$14,400, and distribute it to the individual holders.

OFFICERS.

President. — Samuel N. Bell.

Treasurer. — James A. Weston.

Directors. — Samuel N. Bell, Natt Head, Frederick Smyth, L. B. Towle, C. H. Carpenter, R. L. French, M. V. B. Edgerly.

MANCHESTER AND NORTH WEARE RAILROAD.

Line of Road. — Manchester to North Weare. Length, 19 miles.

This road was originally chartered in 1846, under the title of the New Hampshire Central Railroad Corporation, and authorized to build a road from Manchester to Claremont to connect with the Sullivan road. The road was completed in 1850. In 1853 an act was passed empowering the New Hampshire Central and the Concord and Claremont railroads to unite, under the title of the Merrimack and Connecticut Rivers Railroad Corporation. In 1858 the Manchester and North Weare Railroad Corporation was chartered, being expressly authorized to purchase the franchises and property of the New Hampshire Central company, which were about to be sold by the trustees of mortgagees, who held mortgage of the same dated January 24, 1851. The act authorized the purchasers to organize a new company, and use the property of the old New Hampshire Central Railroad under the new title. The property was thus sold in 1859, the nominal capital being fixed at \$200,000. Since that date the line has been known as the Manchester and North Weare Railroad, and has been operated by the Concord Railroad corporation, by whom the road is substantially owned. No independent organization of the Manchester and North Weare company is maintained, and no separate books are kept by the Concord Railroad corporation.

The name of this corporation does not appear in the statutes of the State. The act for the relief of the stockholders of the New Hampshire Central Railroad Company, June 26, 1858, authorized the purchasers of the franchises, rights, and property of the corporation to organize as a new corporation, and to adopt "a corporate name and seal." This they proceeded to do, selecting "Manchester and North Weare Railroad" as their corporate title.

NASHUA, ACTON, AND BOSTON RAILROAD.

Line of Road. — Nashua to Acton, Mass. Length, 20.21 miles, of which 4.75 miles are in New Hampshire. Sidings, 2.53 miles.

This road was chartered in Massachusetts in 1871; in New Hampshire in 1872; opened in 1873. In 1876 the road was leased to the Concord Railroad corporation for a term of ten years, from January 1, 1876, at an annual rental of \$11,000. The gross earnings of the road for the year ending September 30, 1875 (the year before it was leased), were 10,017.17 less than the operating expenses.

The total cost of road and equipment was \$1,043,481.05. Merely a nominal organization of the lessor company is maintained.

OFFICERS.

President. — J. C. Moulton, Laconia, N. H.

Treasurer. — F. D. Cook, Nashua, N. H.

Directors. — J. C. Moulton, Henry Parkinson, C. G. Sargent, Joseph B. Clark, E. P. Brown, J. Fletcher, Jr., Benjamin Saunders, S. M. S. Moulton, E. B. Hammond, Dana Sargent.

MANCHESTER AND LAWRENCE RAILROAD.

Line of Road. — Main line, Manchester to State line at Methuen. Length, 22.39 miles. Branch: Methuen to Lawrence. Length, 3.75 miles. Total length, 26.14 miles.

This road was chartered June 30, 1847, to extend from the State line in Salem to the Concord Railroad in Manchester; opened for passengers in 1849, and for freight in 1850. The Methuen branch, chartered in Massachusetts in 1846, and opened in 1847, was built by the Boston and Maine Company, to whom it still belongs. It has always been controlled and operated by the Manchester and Lawrence Company. At first the rental was much lower, but

for many years it has been \$10,000. In 1856, the Manchester and Lawrence road was leased to the Concord Railroad Company for five years, and in 1861 the lease was extended for a further term of twenty years. By the terms of the lease the lessors were to receive two-fifths of the net income of the four combined roads, after deducting the annual rental of \$25,000 paid by the lessees for the use of the Concord and Portsmouth road, and the annual rental paid by the lessors for the use of the Methuen branch, the combined roads to be known as the "Concord and Manchester and Lawrence Railroad." In 1867 a law was enacted by the legislature of New Hampshire which was held by the supreme court to prohibit this combination. While the controversy was in the hands of the court the roads were placed in the charge of a receiver; and since the opinion of the court was rendered in 1867, the Manchester and Lawrence road has been run independently in form, though still a combination,—as a single line in fact, but with two sets of books;—a circumstance which is necessary to be known in order to a clear understanding of the financial statement of this road.

Notwithstanding the continued depression of business, the directors report an increase in the gross business for the year, both in the number of tons and of passengers carried during the year, over that of the preceding year, although the rates have been somewhat lower than during the corresponding period of last year.

The directors express confidence that the interests of the public, as well as of the stockholders, would be promoted by an arrangement between this and connecting roads, above and below, to facilitate transportation, and they suggest the seeking of legislative authority for such arrangements. During the year 280 tons new rails have been laid, and the road maintained in usual good condition.

No accident has occurred to the road or to its trains during the year, such as to interfere with its regular operation.

No passenger or employe has been seriously injured. In October, 1878, a boy, while attempting to steal a ride at Lawrence, on a freight train, was run over and killed.

FINANCIAL STATEMENT OF YEAR ENDING MARCH 31, 1879.

Gross Earnings.

From passengers,	\$53,151.29
freight,	32,327.77
rents,	168.50
express,	6,042.63
mails,	3,345.97
	\$95,036.16
Received of Concord Railroad,	69,962.41
Total earnings,	\$164,998.57

Gross Expenses.

Total expenses,	\$53,586.75
Rent Methuen branch,	11,000.00
Total,	\$64,586.75
Net earnings,	30,449.41
	\$95,036.16
Net earnings brought down,	\$30,449.41
Received of Concord Railroad on account,	69,962.41
	\$100,411.82
Two dividends, five per cent each,	100,000.00
Surplus,	\$411.82

The accounts in the following balance-sheet to which no valuation has been placed, represent the interest this corporation has in those items of property, and which, at the time of stating this balance, had not been definitely settled, but which since that date have been, with the exception of the interest in the Manchester and North Weare Railroad, satisfactorily adjusted, and are at the proper time to be entered to the credit of this corporation.

BALANCE-SHEET, MARCH 31, 1879.

Dr.			Cr.
Construction,	\$1,000,000.00	Capital stock,	\$1,000,000.00
Telegraph,	4,770.35	Notes payable,	28,998.23
Hooksett branch,	18,000.00	Dividends unpaid,	5,688.50
New car account, Vt. Central,	17,353.60	Income and expense,	89,548.55
Concord, M., and L. R. R.,	32,000.00		
Manchester and N. Weare R. R.,	00,000.00		
Suncook Valley Railroad,	00,000.00		
Mt. Washington Railroad,	00,000.00		
Cash,	52,111.33		
	<u>\$1,124,235.28</u>		<u>\$1,124,235.28</u>

SUMMARY EXHIBIT LAST TEN YEARS.

Years.	Gross Earnings.	Net Earnings.	Expenditures.	Dividends.	Per cent
1869-70	\$142,972.00	\$102,630.00	\$93,787.00	\$1,000,000	10
1870-71	.....	101,392.00	.....	1,000,000	10
1871-72	193,905.00	100,565.00	93,339.00	1,000,000	10
1872-73	177,083.00	100,505.00	76,578.00	1,000,000	10
1873-74	190,037.00	100,723.00	89,314.00	1,000,000	10
1874-75	183,646.00	101,117.00	82,528.00	1,000,000	10
1875-76	179,246.00	100,687.00	78,560.00	1,000,000	10
1876-77	177,702.00	100,436.00	77,266.00	1,000,000	10
1877-78	171,777.00	199,459.00	71,318.00	1,000,000	10
1878-79	164,997.00	100,411.00	64,586.00	1,000,000	10

OFFICERS.

President. — E. A. Straw, Manchester.

Treasurer. — George B. Chandler, Manchester.

Asst. Supt. — J. W. Hildreth, Manchester.

Directors. — E. A. Straw, B. F. Martin, Edward A. Abbot, Joseph W. Smith, Nathan Parker, William A. Tower, Asa Fowler.

BOSTON, CONCORD, AND MONTREAL RAILROAD.

Main line: Concord to Wells River, 93.506 miles. Extension and branches: White Mountains Railroad, Wells River to Littleton, 20.3 miles; extension, Littleton to Groveton Junction, 31.65 miles; branch to base of Mount Washington, 20.39 miles. Total length of line owned by the company, 165.846 miles. Sidings and other tracks, 19 miles.

This road was chartered December 27, 1844; construction begun in 1847; opened from Concord to Plymouth, 1849; to Wells River, 1853; to Northumberland, 1872; to Fabyan Place, July, 1874. The White Mountains Railroad, chartered in 1848, was consolidated with this road in 1872, when it had been opened to Northumberland. The act authorizing the consolidation was passed in 1871, but the arrangement was not consummated till 1873. The consolidation was effected by the issue of six per cent bonds of the Boston, Concord, and Montreal Railroad Company, which the owners of the White Mountains road received in exchange for their stock. Such bonds were issued and exchanged to the amount of \$200,000 in 1872, but the arrangement was not completed till 1874, when the further amount of \$100,000 of such bonds were issued, to consummate the exchange of bonds for stock. The Wing road to Fabyan Place was at the same time pushed with great energy to completion. This company experienced a perpetual financial struggle from 1850 onward till January 1, 1857, becoming so burdened as to be unable to meet the interest on its bonded debt; the road passed into the hands of trustees. It was so fortunate, however, in the superior wisdom, courage, and forecast of the men who guided, and who, under trustees, continued to guide its operations, that it soon rose superior to its pecuniary distresses, and in 1859 was restored to the full control of its old managers.

No railroad in New England has had a better succession of men than this to fill its chief administrative office. Hon. Josiah Quincy, from the organization of the corporation in 1844, till age and infirmities admonished him to retire, in 1860, for a period of sixteen years, discharged the arduous responsibilities of the presidential office with singular fidelity and capacity; and it was a signally good fortune for the company, when he withdrew, to have, within its ranks, a man to assume the helm so remarkably endowed

with the qualities essential to pilot the corporation in the perils of that period as was John E. Lyon, who, thenceforward to the day of his lamented death, a period of seventeen years, with so much courage, fidelity, and administrative power, guided its affairs triumphantly through a sea of difficulties and saved it from an impending ruin. The directors of the company, in their report last year, accorded him no more than he merited in saying of him, that, a man "indefatigable, cautious, and circumspect in business," he brought to the administration of the road "the same care, diligence, and untiring industry that he applied to his own private affairs," and that "without flattery, it could be said that the present successful condition of the road is almost entirely due to his efforts, and the confidence with which he inspired his associates; to his enterprise and to the aid of his personal efforts, as well as to the foresight and capital which he furnished, is due the extension of the road from Littleton to Lancaster, and ultimately to the junction with the Grand Trunk Railway at Groveton in the town of Northumberland, and also the construction of the branch road extending from the Wing Road Station to the base of Mount Washington."

It is sufficiently creditable to the present administration of the road that it can justly be said to show a continuance of the same excellent foresight and fidelity which fashioned its operations under the former leaders.

FINANCIAL STATEMENT OF YEAR ENDING MARCH 31, 1879.

Earnings of Road.

From passengers,	\$243,451.96	
freight,	315,734.46	
mails,	16,638.25	
express,	9,000.00	
miscellaneous,	5,735.82	
Total earnings,		\$590,550.49

Expenditures of Road.

Maintenance of way,	\$103,730.83	
motive power,	49,237.91	
Cost of working road,	195,429.62	
management,	18,267.74	
Miscellaneous expenses,	22,265.78	
		<u>\$388,931.88</u>
Net balance,		<u>\$201,618.61</u>

TREASURER'S BALANCE-SHEET, MARCH 31, 1879.

Dr.			Cr.
Construction,	\$2,850,000.00	Stock (old, dividends, etc.),	\$459,600.00
Wood, oil, etc., on hand,	59,663.59	Stock, preferred,	300,000.00
Stock, etc., on hand for repairs,	103,741.53	Stock, new,	540,400.00
Trustees of sinking fund,	201,500.00	Bonds due in 1865,	25,700.00
Pemigewasset House,	16,000.00	Bonds due in 1875,	156,500.00
J. A. Dodge, general manager,	23,226.00	Bonds due in 1889,	624,000.00
Purchase of White Mts., N. H.,		Bonds due in 1893,	1,721,000.00
Railroad,	300,000.00	Coupons due and unpaid,	1,162.50
Extension of White Mts., N. H.,		Dividends due and unpaid,	1,448.89
Railroad,	790,000.00	Dividends due and unpaid since	
Branch Railroad to Mt. Wash-		May 20, 1867,	10,236.00
ington,	379,000.00	Profit and loss,	582,485.09
Cash on hand for coupons un-			
paid,	1,162.50		
Cash on hand for dividends un-			
paid,	11,744.89		
Cash and bonds on hand,	180,553.97		
	<u>\$4,922,592.48</u>		<u>\$4,922,592.48</u>

SUMMARY EXHIBIT LAST TEN YEARS.

Fiscal Years.	Gross Earnings.	Gross Expenditures.	Net Earnings.	Dividends.	Per cent
1869-70	\$506,523.16	.....	\$80,691.86	\$48,000	6
1870-71	572,495.29	.....	126,000.00	48,000	6
1871-72	634,895.71	.....	134,252.23	44,358	6
1872-73	670,348.78	.....	131,714.88	46,830	6
1873-74	687,128.56	.....	136,147.36	44,454	6
1874-75	664,194.38	.....	140,208.63	48,804	6
1875-76	693,354.97	.....	182,012.33	45,249	6
1876-77	649,301.81	\$457,377.44	191,930.37	44,665	6
1877-78	654,272.20	453,177.84	201,100.36	46,971	6
1878-79	590,550.29	388,931.88	201,618.61	45,246	6

It will be seen that while, during the last year, the decrease in gross receipts, which resulted mainly from the falling off in freight, on account of continued depression of business in the country, was quite large, the reduction

in the expenditures was at the same time sufficient to produce a small increase of net earnings for the year.

The track and furniture are in very superior condition. Within the year, 200 tons steel and 500 tons iron rails have been laid; 1,318 tons rails have been taken up, mended, and returned to track; and 3,000 Fisher and Norris improved joints have been used.

The present equipment is as follows: Passenger and freight engines, 30; passenger-cars, 25; drawing-room cars, 2; mail and baggage cars, 16; freight-cars, 572.

The old contracts with the Southeastern and the Passumpsic, which ended last year, and were renewed under fair conditions for the term of ten years ending May 1, 1888, cannot fail to benefit all concerned, as the combination, in connection with arrangements with the lower roads, forms a most superior line through New England into Canada.

No new contracts have been completed, but a temporary arrangement has been made with the Burlington and Lamoille Valley Railroad in connection with the Portland and Ogdensburg Railroad, for a new line for the transportation of freight and passengers from Burlington, by way of the Montpelier and Wells River Railroad, to Woodsville, and then over the Boston, Concord, and Montreal Railroad, by way of Fabyan's and the Portland and Ogdensburg Railroad to Portland.

The road has disposed of the consolidated bonds to the amount of \$243,000, which have been applied to take up a portion of the overdue bonds of 1865 and 1875.

Of the sinking fund bonds there are now outstanding but \$202,000, on which interest is paid, the company holding \$116,000, and the trustees of the fund \$306,000. Of the outstanding bonds of 1865 and 1875, as appears in the trial-balance, the road has paid for and is carrying \$147,500, leaving a balance of \$34,700 to redeem.

The consolidation of the different classes of stock, which has been several years in process of execution, and

the completion of which is believed to be absolutely indispensable to the payment of dividends beyond the preferred stock, did not make much progress during the year, nor was anything done towards the extension of the road beyond Groveton towards Colebrook; both of which objects, it is confidently expected, will be accomplished at an early day, the postponement being due to the continued depression of business, and some other special and temporary obstacles. In relation to this extension of the road, it is well known that Mr. Lyon had long held it as one of the paramount aims of his great work at the head of this road to extend its line to Colebrook and ultimately to Canada, at as early a day as the finances of the company would permit. The directors, who fully concurred with Mr. Lyon in this purpose, are still animated with the same views, that the best interests of the road, and of the whole northern section of the State of New Hampshire, require that measures shall be undertaken to forward the project as soon as the means at their command will admit, consistently with a due regard for the claims of the people and the interests of the stockholders.

CASUALTIES.

Although the road suffered some serious casualties during the year, no accident inculpatng the road happened during the year, and no passenger was injured. An accommodation train, near Tilton, July 2, was thrown from the track by the expansion of the rails, badly damaging engine and baggage-car; and the night express, during the flood, December 10, was thrown from the track near North Concord, doing much damage to engine and baggage-car; two freight trains, near Wentworth, being the same night thrown from the track, on account of the sudden change of the course of the river in this unprecedented inundation. March 10, 1879, Frank Smith of Haverhill, N. H., was knocked from a cattle train by the

bridge at the Wiers, and died in a few hours. Amos W. Baker, brakeman, White Mountain freight train, fell from the train near Lisbon, November 30, 1878, and died a few days afterward.

OFFICERS.

President. — J. Thomas Vose, Boston.

General Manager. — Joseph A. Dodge, Plymouth.

Treasurer. — Edward D. Harlow, Boston.

Directors. — J. Thomas Vose, Joseph P. Pitman, Peter Butler, S. N. Bell, Joseph A. Dodge, John P. Spaulding, Warren F. Daniell.

MOUNT WASHINGTON RAILROAD.

Line of Road. — Base of Mount Washington to summit. Length, 3 miles.

This road was chartered in 1858, and by repeated extensions the charter was kept alive till the commencement of construction in 1870 rendered the legislation permanent. The scheme of running up and down this mountain with a steam-locomotive by means of cogged-wheel machinery was entertained by Herrick Aiken, of this State, so noted for his inventive genius in his day, as early as 1850; and about 1857, having visited the mountain expressly for observation with this conception in view, he built a model to exemplify his plan. Failing health, however, arrested his experimental work. The cogged-wheel device, which was actually put into use on the Mount Washington road in 1872, is, in an important degree, the invention of Sylvester Marsh of Littleton, the traction being effected by a cogged wheel working into a cogged rail firmly spiked to the track. The Mount Rigi Railway in Switzerland, on the same plan, was completed in 1873. The traction of the engine on the Mount Cenis Railway, Switzerland, which was constructed

in 1865-68 by the English engineer, Lull, is secured by two wheels working horizontally under heavy pressure against the sides of a middle rail; and there is another mountain railway, recently devised, upon which the cars are carried astride a single line of rails, in turn supported upon a line of posts. Herrick Aiken was regarded by railroad engineers, to whom he presented his scheme, from 1850 downwards, as visionary in the extreme, and such in fact was the very general impression among even the more ingenious engineers, down to the very time in which the plan under Mr. Marsh's inventive skill was put into operation, when the Mount Washington road was opened in 1872.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Cost of road and equipment,	\$150,000.00
Capital stock,	129,500.00
Income from passengers,	\$26,687.10
Income from freight,	240.00
Income from other sources,	355.78
Total income,	\$27,282.88
Total expenses,	14,163.04
Net earnings,	\$13,119.84
Paid interest on notes to New York, New Haven, Hartford, and Con- necticut River Railroad, \$10,000, for 1 year,	\$600.00
Dividend No. 2 on 1,295 shares at \$9,	11,655.00
Dividend No. 1 on \$500 scrip, at 9 per cent,	45.00
For all outstanding scrip taken up,	500.00
	\$12,800.00
Surplus,	\$319.84
Indebtedness as above, \$10,000.	

OFFICERS.

President. — Sylvester Marsh, Littleton, N. H.

Treasurer. — Edward P. Harlow, Boston, Mass.

Manager. — Walter Aiken, Franklin, N. H.

Directors. — Sylvester Marsh, Littleton, N. H.; J. Thomas Vose, Boston, Mass.; Nathaniel White, Concord, N. H.; Walter Aiken, Franklin, N. H.; Emmons Raymond, Boston, Mass.; John H. George, Concord, N. H.; Joseph A. Dodge, Plymouth, N. H.

WHITEFIELD AND JEFFERSON RAILROAD.

Line of Road. — Whitefield to Jefferson. Length, 10 miles.

This company was chartered July 11, 1878, authorized to build a railroad from some convenient point on the Boston, Concord, and Montreal Railroad, in Dalton or Whitefield, to some convenient point in Randolph, with authority to extend a branch into Kilkenny and Berlin, and with authority to lease the road to any other railroad company on such terms and for such time as the parties may determine. This road has been in operation as a lumbering railroad for several years, built by the so-called Brown Lumbering Company, of which some of the grantees of the new company have been members, and who own a vast tract of timber land through which the road runs. The road, which was run into the forest in a zigzag way, to meet the demands of the lumbering business, has been straightened and now runs in direct line through an unbroken forest the most of its course. The capital stock is fixed not to exceed one thousand shares, at \$100 each, but it is understood that an enlargement of the capital will be asked from the present legislature. The cost of building the road which is now opened was assumed one-half by the Boston, Concord, and Montreal Railroad

Company, and the other half by the Brown Lumbering Company. The grantees named in the charter are the directors of the company. The road is still in the hands of the contractor at the time of writing this notice.

OFFICERS.

President. — Aaron Ordway.

Treasurer. — E. D. Harlow.

Superintendent. — A. L. Brown.

Directors. — Aaron Ordway, Alson L. Brown, Warren G. Brown, Nathan R. Perkins, Josiah T. Vose, Samuel N. Bell, Joseph A. Dodge, Warren F. Daniell.

PROFILE AND FRANCONIA NOTCH RAILROAD.

Line of Road. — Bethlehem Junction to the Profile House. Length, 10 miles. Gauge, 3 feet. Rail, Pennsylvania iron, 35 pounds to yard.

This road was chartered July 11, 1878. The corporation was authorized to construct a railroad from some point on the Mount Washington branch of the Boston, Concord, and Montreal Railroad in Bethlehem, to some point in Franconia near the Profile House, the capital stock of the corporation being limited to 2,000 shares of \$100 each. The building of a railroad up the Pemigewasset valley from Plymouth to the Franconia Notch, of which scheme this road is the initiatory work, has long been in contemplation among railroad men and capitalists interested in opening up that grand and attractive region to the utmost as a summer resort, by means of the most inviting avenues of travel.

This enterprise was fortunate at the outset in the character of the men who took it in hand, and has continued to be equally so in all the work of construction, from first to last. The corporation fixed the capital stock originally at

\$110,000. The work of construction was begun last autumn, and the road was opened June 25, 1879. The road runs from Bethlehem through an unbroken wilderness to the Profile House, the grade in one place reaching 116 feet to the mile, but not on the average a heavy grade. The trains will run at the rate of speed usual on ordinary railroads. The road was of easy construction, costing about \$10,000 per mile, exclusive of equipment. The equipment consists of 2 engines of 22 tons each, costing \$5,000 apiece; 4 passenger and 2 combination cars, and 6 flat freight cars. The passenger cars are 45 feet in length, each containing 50 sittings. Two of them are of the ordinary monitor style, and two are for observation, — monitor top, — each containing 60 movable chairs, and large windows which let down. The cars cost \$12,000. There will be no debt upon the road. It will be built and equipped wholly from subscriptions to the stock. Total cost of road and equipment about \$125,000. There will be at least 3 daily trains run through the season. As this is the first narrow-gauge railroad in this State as is constructed for peculiar service, it has been deemed proper to make special note of the enterprise.

Narrow-gauge railroads have been built in many parts of the world, and have gained much favor. The first attempt of the kind was a horse-railway of 2-feet gauge in Wales, in 1832, and in 1869 an engine weighing $19\frac{1}{2}$ tons was put upon the road with great success. The friends of the narrow-gauge system maintain that it is superior to the wide gauge, both in economy and safety.

The list of the officers of this New Hampshire narrow-gauge road embraces the men who are chiefly to be accredited for this laudable and well-executed undertaking.

OFFICERS.

President. — Richard Taft, Franconia.

Treasurer. — Charles H. Greenleaf.

Superintendent. — Charles C. Lund, Concord.

Directors.—Nathaniel White, Concord; Richard Taft, Franconia; Walter Aiken, Franklin; Emmons Raymond, Boston, Mass.; J. A. Dodge, Plymouth; John H. George, Concord; Samuel N. Bell, Manchester.

NORTHERN RAILROAD.

Line of Road.—Concord to West Lebanon. Length, 69.5. Branch: Franklin to Bristol, 13.41 miles. Total length of line owned and operated by company, 82 miles. Sidings, 16.54 miles.

This railroad was originally chartered June 18, 1844, to extend from the Concord Railroad in Concord or Bow to the east or west bank of the Connecticut River in Haverhill or Charlestown, or some point between those towns; but at the fall session the legislature chartered, in the place of this, December 27, 1844, another road, beginning as in the other charter, but ending at the west bank of the Connecticut River in the town of Lebanon; the number of shares of capital stock authorized in the new charter having increased from eight to fifteen thousand.

The Bristol branch, originally chartered July 8, 1846, to extend from the line of Northern road in Franklin, through Hill to Bristol village, under the title of the Franklin and Bristol Railroad, was consolidated with the Northern Railroad by an act passed by the legislature January 1, 1869. The act to unite the two roads provided that the capital stock of the Franklin and Bristol road should be at two thousand shares, should become a part of the capital stock of the Northern road, the increase of which, from fifteen to seventeen thousand shares, was authorized by the act, the stockholders of each of the two roads becoming stockholders in both roads on an entire equality.

Construction was commenced, and the first section from

Concord to Franklin, 18 miles, was opened December, 1847. The main line to Lebanon and the branch to Bristol were pushed onward, and the whole was completed and opened to traffic in July, 1848. George W. Nesmith, venerable and venerated, its president at the age of almost fourscore years, may justly be called the father of this road. From the earliest conceptions and movements which resulted in the establishment of this great industrial enterprise, for a period of more than thirty-five years, he has been one of its wisest and ablest leaders. Always closely identified with the road in an official capacity, from the foundation of the corporation down to this time, every year of his service has but added to the large confidence in his wisdom and integrity with which he was first called into the management of the corporation. Nor should the name of Onslow Stearns, the late president of this corporation, receive less honorable notice in this place. Born in Billerica, Mass., in 1810, and entering into the calling of a civil engineer in 1830, at the age of twenty years, in the construction of the Chesapeake and Ohio canal, he was, from 1833 to 1837, constantly and on a large scale, engaged in contracts on the great road then under construction in Pennsylvania, Maryland, New Jersey, and New York. In 1837 he returned to New England to embark in the construction of various roads in Massachusetts, and, among others, the Nashua and Lowell road, the completion of which he undertook in the latter part of that year. While engaged in this work he was elected superintendent of that road, a position which he held till July, 1845, when he resigned, in order to enter into the employ of the Northern Railroad corporation as its agent, to build their road, a place which he filled, as he did all other positions of responsibility to which he was called in his remarkable career, with eminent capacity and fidelity. From the construction of the road down to 1852 he was the superintendent of its operations, and from 1852 to the day of his death, Decem-

ber 29, 1878, was the president of the company. His conspicuous and arduous official positions in other great railroads of New England during the last twenty years of his life, and his upright and influential services in the political affairs of the State, as a member of both branches of the legislature and as the chief magistrate of the commonwealth, are well known. When such a man dies the public welfare suffers a severe loss. The directors of the Northern Railroad, in their last annual report, after saying of his death that "it will be fortunate for the interests of this corporation if the loss shall not long be felt in the want of his experience, ability, and faithful labors in the future management of its affairs," put on record the following expression of their sense of his character and services: —

"Resolved, That in the recent death of Hon. Onslow Stearns we feel a great loss to ourselves personally and to this company. It has terminated the harmonious and pleasant relations which for a quarter of a century have existed between the members of this board and him as their associate and president; and it has taken from the company a most capable and faithful officer,— one whose long-continued services for its interests, and whose well-known industry, honesty, and economy in the management of its affairs, will be gratefully remembered by its stockholders. The courage and persistency with which, in despite of the weakness and pain of disease, and against the fears of friends, he continued attention to the cares and duties of his position up to his latest days, were in full consistency with the spirit and fidelity which characterized his whole life."

Nor is it without propriety to mention, in this connection, George E. Todd, who succeeded Mr. Stearns in the superintendence of the road, and who has been in constant service on the road since its completion, in 1848, down to the present time, fulfilling his duties with universal approbation in every station.

It will be seen in the subjoined financial statement, that, while the operations of the road exhibit wisdom and economy in its management, and fair results, the indication of increased business and profits with which the previous year closed has not been fulfilled. The actual result has been, compared with last year, a decrease in the gross receipts of \$37,157.48, and a decrease in the gross expenses of \$27,389.69, with a consequent reduction in the annual net income of \$9,797.79. This result the directors in their current annual report charge mainly to the rates of through-freight from the West, in fixing which this road, being a small link, has no controlling voice. The directors have given great and anxious attention to the subject during the year, without satisfactory results, and, in case further exertions do not effect some relief from the disastrous arrangements, the directors say, "The question will then arise whether it is expedient for this road to continue that business which at present is attended with very little if any profit to it."

The road and other property of the corporation have been maintained in good condition, and its equipment is sufficient for its requirements.

During the past year 423 tons of new iron and 988 tons of steel rails, and 55,853 new sleepers, have been placed in the track ; and about 2,900 tons of rails have been repaired and relaid. Two freight engines have been built over, and four new freight cars made to supply the place of others.

This corporation, being substantially the owner of both the Concord and Claremont and of the Sullivan Railroads, is, next to the Boston, Concord, and Montreal Company, the heaviest railroad organization in the State, and is confessedly as well managed a railroad as there is in any State.

FINANCIAL STATEMENT, YEAR ENDING MARCH 31, 1879.

Capital stock authorized and paid in,	\$3,068,400.00
Cost of construction and equipment,	3,068,400.00
Total funded debt (no floating debt),	189,000.00

Income.

From passengers,	\$133,737.42
merchandise,	263,530.24
miscellaneous,	29,606.21
Gross earnings,	<u>\$426,873.87</u>

Expenses.

Passenger department,	\$20,315.36
Merchandise department,	24,465.08
Locomotive department,	111,750.93
Maintenance of way,	77,221.29
New rails,	21,472.51
All other accounts,	64,276.68
Total expenses,	<u>\$319,501.85</u>
Net earnings,	<u>\$107,372.02</u>

TREASURER'S BALANCE-SHEET, MARCH 31, 1879.

Dr.			Cr.
Construction,	\$3,068,400.00	Stock,	\$3,068,400.00
Rails,	21,061.57	Income,	123,232.97
Oil,	1,007.76	Contingent fund,	484,873.73
Waste,	386.89	Premiums,	3,580.01
Fuel,	42,506.75	Bonds due April 1, 1874,	100.00
Shop stock,	32,024.17	Dividends unpaid,	5,682.76
711 shares Northern R. R., N. H.,	37,708.34	Coupons unpaid,	189.00
Contracts,	22,606.11	Bills payable,	189,000.00
Cash,	30,238.07	Dividend, June 1, 1869,	74,932.50
Agent's department,	18,263.59		
Bills receivable,	421,530.00		
Concord & Claremont N. H. R.R.,	254,245.72		
	<u>\$3,949,996.97</u>		<u>\$3,949,996.97</u>

SUMMARY EXHIBIT LAST TEN YEARS.

Years.	Gross Earnings.	Net Earnings.	Funded Debt.	Dividends.	Per cent
1869-70	\$689,628.03	\$256,271.92	\$115,000.00	\$250,504.49	8
1870-71	1,057,815.30*	292,206.77	105,200.00	241,713.03	8
1871-72	722,774.65	187,741.35	102,100.00	240,780.52	8
1872-73	706,355.24	161,064.70	102,100.00	239,848.00	8
1873-74	707,760.09	215,806.96	102,100.00	239,848.00	8
1874-75	636,125.57	166,377.56	100.00	209,867.00	7
1875-76	503,984.86	95,249.94	100.00	149,905.00	5
1876-77	458,303.16	103,415.58	100.00	149,885.00	5
1877-78	464,031.35	107,139.81	100.00	149,865.00†	5
1878-79	426,873.87	107,372.02	100.00	149,865.00†	5

OFFICERS.

President. — George W. Nesmith, Franklin.

Treasurer. — George A. Kettell, Boston.

Superintendent. — George E. Todd, Concord.

Directors. — George W. Nesmith, Uriel Crocker, Edward Lawrence, Francis B. Hayes, Josiah H. Benton, Jr., George E. Todd, Albert M. Shaw.

PETERBOROUGH AND HILLSBOROUGH RAILROAD.

Line of Road. — Peterborough to Hillsborough Bridge. Length, 18.5 miles.

This road was chartered in 1869, with the right to construct a railroad to connect with the Monadnock Railroad in Peterborough, and the Contoocook Railroad in Hillsborough, forming a continuous line with those roads. The capital stock is \$500,000. In 1872 the charter was extended, allowing the company till 1877 to complete the road, but requiring at least \$50,000 to be expended in the construction prior to January 1, 1876, allowing till May 1, 1877, for the expending of the specified sum, and till August 1, 1878, to complete the road.

The corporation was duly organized in 1876. The road was opened in July, 1878.

* Includes earnings of Concord Railroad, April to September, 1870, under contract.

† Includes net earnings and a portion of interest income.

The capital stock is \$500,000 ; and \$100,000 first-mortgage bonds and \$75,000 second-mortgage bonds were issued to furnish means to complete the work.

OFFICERS.

President. — George E. Todd, Concord.

Treasurer. — Josiah Minot, Concord.

Directors. — Josiah Minot, Concord ; James A. Rumrill, Springfield, Mass. ; Amos Whittemore, Bennington ; John M. Hill and Gust Walker, Concord.

SULLIVAN COUNTY RAILROAD.

Line of Road. — Windsor, Vt., to Bellows Falls, Vt. Length, 26 miles.

This road, with the exception of its termini, which are both in Vermont, is wholly in New Hampshire, running along the New Hampshire shore of the Connecticut River. It was chartered July 10, 1846, as the Sullivan Railroad, and completed in 1852, at a cost of more than \$1,250,000. The capital stock (\$500,000) was all paid in, and mortgage bonds, amounting to about \$750,000, issued to fund the debt. In 1851 the road, with its appurtenances, was all transferred to the hands of a trustee, to be operated for the benefit of the holders of the bonds, and was managed in this way till, in 1866, having become so embarrassed as to entirely fail to meet the interest on the bonds, the whole road, with its rights and franchises, was sold for \$500,000 to the holders of the bonds, who were really the Northern Railroad corporation, and who organized themselves into the Sullivan County Railroad corporation, to manage the property. They immediately leased the road for a term of five years to Hon. J. Gregory Smith, the president of the

Vermont Central Railroad corporation, at an annual rental of \$25,000, and in 1871 extended the lease to 1876, since the expiration of which term it has been operated by the Vermont Central road under a lease based on the earnings. The road is furnished by the Vermont Central company. At the time of the expiration of the lease in 1876, it was understood that the road was returning the lessees a large net income, and the following statement seems to support that impression.

FINANCIAL STATEMENT, YEAR ENDING MARCH 31, 1879.

Expenditures.

For repairs of road,	\$20,276.33	
For repairing gates, fences, and houses,	678.30	
For taxes and insurance,	5,751.76	
For removing ice and snow,	114.58	
For fuel,	16,107.02	
For oil,	624.66	
For waste and other material for cleaning,	131.43	
For use of locomotives,	7,882.72	
For use of passenger cars,	4,876.20	
For use of merchandise cars,	16,501.99	
For wages of stationmen,	4,241.15	
For wages of conductors and brake- men,	10,587.40	
For wages of enginemen and fire- men,	6,568.85	
For wages of watchmen,	462.00	
For all other expenses,	2,953.61	
Total expenditures,		\$97,758.00

Income.

From passengers,	\$50,498.98
freight,	110,521.01
mails,	4,198.56
expresses,	1,800.00
Total income,	\$167,018.55
Net earnings, after deducting expenses,	\$69,260.55

CONCORD AND CLAREMONT RAILROAD.

Line of Road.—Concord to Claremont. main line ; length, 56 miles. Branch: Contoocook to Hillsborough Bridge, 14.9 miles. Total length of line operated by company, 70.9 miles.

This road is the outcome of a long series of conflicting and unsuccessful railroad schemes. The old Concord and Claremont Railroad company, chartered June 24, 1848, proposed to build a railroad from some point on the Concord Railroad, in Concord or Bow, to the Sullivan Railroad, in Claremont; and the Central Railroad company, chartered on the same day, proposed to build a road from Manchester to the Sullivan road, at or near Claremont. These two corporations, in order to obviate conflicting interests, and to concentrate efforts for the construction of a single road on a route that would be best for all concerned, were united under an act for that purpose passed June 8, 1853, the consolidated company taking the title of the Merrimack and Connecticut River Railroad company, which became the owner of the old Concord and Claremont Railroad that was completed from Concord to Bradford, 27 miles, July 10, 1850. The Contoocook River Railroad, chartered June 24, 1848, completed in 1849 from Contoocook to Hillsborough

Bridge, 14.5 miles, and opened in December, 1849, was united with the Merrimack and Connecticut River Railroad, under an act passed July 12, 1856, and, under another act of the same date, the mortgagees of the Contoocook Valley Railroad, chartered June 24, 1848, to connect the Concord road in Concord with Peterborough, were authorized to sell the Contoocook Valley road, with all its franchises and property, to the Merrimack and Connecticut River road. The Sugar River Railroad, chartered July 7, 1856, to connect Bradford with the Sullivan Railroad in Claremont, a distance of 29 miles, was completed in 1872, and was, under the provisions of an act for that purpose, organized in a consolidation with the Merrimack and Connecticut River Railroad, October 31, 1873, under the title of the Concord and Claremont Railroad. It is thus seen that six chartered companies are consolidated in the company as it now exists, and that the old Concord and Claremont company was chartered twenty-five years before the new Concord and Claremont company was organized.

The aggregate cost of these consolidated roads was about \$1,850,000, but the total cost to the present organization is stated at \$1,126,606.38. The capital stock and debts are as follows: Stock paid in, \$410,000; mortgage bonds, secured by deed of trust of the entire consolidated franchises and property, \$500,000; floating debt, \$254,245.72; total, \$1,665,145.72. A controlling interest in the consolidation is owned by the Northern Railroad company, who furnishes the rolling stock, and essentially manages its operations, which are well conducted. The falling off in the net income of the road, in the last fiscal year, is understood to have been, in a considerable degree, due to the experiment of an extra passenger train over the road, during the season of summer travel, which is not resumed this season.

FINANCIAL STATEMENT, YEAR ENDING MARCH 31, 1879.

Capital stock paid in,	\$410,900.00
Funded debt,	500,000.00
Floating debt,	254,245.72
Total present funded and floating debt,	754,245.72
Total cost of road and equipment,	1,126,606.38
Total expenses working road,	101,262.36
Total earnings,	139,020.36
Net earnings,	37,758.00

SUMMARY EXHIBIT LAST THREE YEARS.

Years.	Gross Earnings.	Gross Expenses.	Net Income.
1876-77	\$148,444.26	\$116,454.71	\$31,989.55
1877-78	145,718.02	96,918.24	48,719.24
1878-79	139,020.36	101,262.36	37,758.00

OFFICERS.

President. — George E. Todd.

Treasurer. — George A. Kettell.

Superintendent. — George E. Todd.

Directors. — Mason W. Tappan, Daniel W. Johnson, Charles Minot, Charles P. Sanborn, Charles O. Stearns, John Kimball.

EASTERN RAILROAD.

Line of Road. — Main line: Boston to State line, 41.39 miles; State line to Portsmouth, 15.90; Portsmouth to Portland, 51. Total distance between Portland and Boston, 108.29. Conway Junction to North Conway, 71.87. (Portsmouth to Conway Junction, 11 miles.) Total length of main line, 179.66.

Branches owned or leased by company: East Boston, double track, length 3.31; Charlestown, double track,

length 1.086 ; Saugus, single track, length 9.52 ; Swamscott, single track, length 3.80 ; Marblehead, single track, length 4 ; Lawrence, single track 17.66, double track 2, length 19.66 ; South Reading, single track, length 8.12 ; Gloucester, single track, length 17.35 ; Essex, single track, length 5 ; Asbury Grove, single track, length 1 ; Salisbury, single track, length 3.75 ; Newburyport City Railway, length 2.80 ; Portsmouth and Dover Railroad, length 10.88 ; Wolfeborough Railroad, length 12.03. Total length of branches, 102.306. Total length of road and branches, 281.966. Double track on main line, 32.80. Double track on branches, 6.396. Total length of double track, 39.196. Aggregate length of sidings and other tracks not enumerated, 66.0425. Total length of track operated by this company, 387.2045. Total length of track laid with steel rails, 123.551. Total length of leased roads in New Hampshire, 107.63.

This road was chartered in 1836, and completed from Boston to the New Hampshire State line in 1840 ; the " Eastern Railroad of New Hampshire," a continuation of the " Eastern Railroad " through New Hampshire to Portsmouth, being also chartered in this State in 1836, and finished in 1841. The Portland, Saco, and Portsmouth road, a continuation of the line to Portland, was chartered in 1837 in Maine, and completed in 1842.

In 1841, the Eastern Railroad Company took a lease of the Eastern Railroad of New Hampshire for the term of 99 years, with the understanding that the lessors' capital, amounting to \$492,500, should be entitled to equal dividends with that of the lessees. In 1841, the Portland, Saco, and Portsmouth road also was leased to the Eastern Railroad Company in a joint interest with the Boston and Maine Railroad Company, for the term of 99 years, thus completing the line of the Eastern road from Boston to Portland, 108.29 miles. In 1871, the Eastern Railroad Company of New Hampshire took a lease of the Portsmouth, Great

Falls, and Conway road, 71.37 miles, for the term of 69 years, and assigned the contract to the Eastern Railroad Company, with the arrangement that it should share equally with the Eastern of Massachusetts and of New Hampshire in the per cent of dividends, the cost of the Portsmouth, Great Falls, and Conway road being \$2,183,300. The Wolfeborough road, 12.08 miles, was leased to the Eastern Railroad Company of New Hampshire, in 1872, for 68 years, in the interest of the Eastern Railroad Company of Massachusetts, at an annual rental of six per cent on its stock, amounting to \$486,000.

The Portsmouth and Dover road, 10.88 miles, costing \$800,000, was leased also to the Eastern Railroad Company of New Hampshire, under like arrangement for 50 years, from 1874, at an annual rental of six per cent on its cost. In 1871, the Eastern Railroad Company of Massachusetts terminated its joint contract with the Boston and Maine Railroad Company, as it had the right under the terms of the contract to do by paying certain liquidating damages amounting to \$100,000, and assumed the lease individually for the unexpired term of 99 years, ending in 1939, at an annual rent of ten per cent on the capital stock of the leased road, amounting to \$1,500,000.

It is seen from these statements that the welfare of four important railroads, of an aggregate length in this State of 107.63 miles, is vitally identified with the fortunes of the Eastern (Mass.) Railroad Company. The extreme embarrassment which overtook this company in 1875 is well known. At that time its affairs were found to be in such a state as to demand some compromise between the stockholders and creditors, and, under a special act of the legislature of Massachusetts, in 1876, to meet the emergency, such a compromise was in a degree effected, though not without producing heavy litigation, which has, however, now been settled by the courts, and, on the whole, very favorably to the interests of this company, the interpretation of the

act of 1876 being thus quite fully settled by judicial decision. The impression so very generally felt two years ago, that the company could never extricate itself from the colossal difficulties with which it was environed, has been very materially removed by the results of the last year's work. In relation to the New Hampshire roads specially identified with these troubles, the last annual report of the directors of the Eastern Railroad Company, September 30, 1878, says: —

“ In the month of June last the supreme judicial court rendered its decision relative to the right of the bondholders of the Portsmouth, Great Falls, and Conway Railroad, to receive certificates of indebtedness by virtue of the guaranty of the bonds by this corporation. The decision was adverse to the bondholders on all points, and left them no recourse except such relief as might be furnished by the courts of New Hampshire, where proceedings had already been begun by a few of the bondholders. Their claim was, that the earnings, both of the Portsmouth, Great Falls, and Conway Railroad, and of the Eastern Railroad in New Hampshire, were taken and held in trust by this corporation for the payment of the interest on the bonds; and, pending the suit, a receiver of both roads was applied for.

“ The interests of this company demanded that all such questions should be definitely set at rest; and accordingly an agreement was made with the Portsmouth, Great Falls, and Conway Railroad, by which that company was to issue a million dollars of four-and-a-half-per-cent bonds, having sixty years to run, and secured by a mortgage of its entire property, in lieu of the million dollar seven-per-cent bonds, due December 1, 1892, then outstanding, bearing the guaranty of the Eastern Railroad; and also to make a new lease to the Eastern Railroad for sixty years in place of the one to the Eastern Railroad in New Hampshire.

“ The Eastern Railroad, on its part, was to pay to the Portsmouth, Great Falls, and Conway Railroad, an annual rental

equal to four and a half per cent upon the new mortgage bonds. This arrangement was duly approved at a meeting of the stockholders of the Eastern Railroad held September 30, 1878, by a vote of 27,144 shares to 54 shares. It was also duly authorized by the stockholders of the Portsmouth, Great Falls, and Conway Railroad.

"In the same connection it became necessary to effect some settlement of the questions at issue in the litigation with the Eastern Railroad in New Hampshire. The prolonging of this litigation was working material injury to this company, and an adverse decision by the courts would have had very serious consequences. A compromise was accordingly effected, by which this company secured, under a new lease, the control of the property of the Eastern Railroad in New Hampshire, for sixty years, at an annual rental of \$22,500. This was also duly authorized by the Eastern-railroad stockholders, at the meeting in September, by the same vote above mentioned, and was also authorized by a majority of the stockholders of the Eastern Railroad in New Hampshire.

"The approval of the railroad commissioners, and of the governor and council of New Hampshire, has been given to the leases of the Eastern Railroad in New Hampshire, and of the Portsmouth, Great Falls, and Conway Railroad, as required by the act of the legislature of New Hampshire. The whole settlement has been consummated, and all the suits at law withdrawn."

The gross earnings of the road fell off for the year, \$55,172.16 ; but the operating expenses were reduced also, \$127,664.73, giving an increase of \$72,492.57 in net earnings. The reduction of expenses was effected without impairing either the administration or condition of the road. The standard of excellence in the road-bed and track has been raised ; steel rails exclusively have been laid ; within the year, 1,480 tons, equal to 16 miles, have been laid, making a total length of 123.50 miles of steel rail ;

1,600 tons being the estimated amount to be used the current year. The tabulation shows the general results of the operations of the company the last five years : —

NET EARNINGS.

Fiscal Years.	Net Earnings.	Increase.	Per Cent.	Decrease.	Per Cent.
1873-74	\$988,317.94	\$445,176.07	81.98	.....	....
1874-75	757,419.13	.....	.....	\$230,898.81	23.37
1875-76	683,594.06	.....	.....	73,825.07	9.75
1876-77	799,317.31	115,723.25	16.93	.....	....
1877-78	871,809.88	72,492.57	9.08	.....	....

FINANCIAL STATEMENT, YEAR ENDING SEPT. 30, 1878.

DR.		CR.	
Total value of construction,	\$7,000,000.00	Capital stock,	\$4,997,600.00
Total value of equipment,	905,000.00	Funded debt,	13,587,021.99
Total investment, real estate and	.....	Notes payable,	1,008,541.22
stocks,	1,493,810.00	Current bills and pay rolls audited,	145,747.85
Total cash assets,	447,547.68	Current traffic balances and	.....
Profit and loss,	10,226,613.04	accounts payable,	41,849.27
		Accrued interest,	97,752.95
		Accrued rentals of leased roads,	178,640.80
		Unpaid dividends,	15,817.00
Total,	\$20,072,970.72	Total,	\$20,072,970.72

RENT OF LEASED ROADS.

Portland, Saco, and Portsmouth Railroad, —
 Six per cent dividend on \$1,500,000 capital st'k, \$90,000.00
 Additional rental for year, 37,812.49
 \$127,812.49

Portsmouth, G't Falls, and Conway R. R., —
 Four and one-half per cent on \$1,000,000 bonds,
 Less owned by E. R. R. Co., 486,000 " " " " " "
 Four and one-half per cent on \$514,000 " 23,130.00
 Eastern Railroad of New Hampshire (as per
 contract), 22,500.00
 Portsmouth and Dover Railroad, —
 Six per cent dividend on stock, 45,468.00

Wolfeborough Railroad, —	
Six per cent dividend on stock,	2,916.00
Newburyport City Railroad, —	
Six per cent on stock,	6,000.00
Boston and Albany Railroad, —	
Use of track (disputed),	7,690.88
Boston and Maine Railroad, —	
Use of track,	6,500.00
Total rent of leased roads,	\$242,017.37

RESULT OF BUSINESS FOR THE YEAR.

The business of the year shows the following results,
viz. : —

A credit for gross earnings from passengers,	\$1,378,747.36
“ “ “ “ freight,	911,995.99
“ “ “ “ mail,	41,104.80
“ “ “ “ express,	62,452.74
“ “ “ “ extra baggage,	3,018.64
“ “ “ “ property,	30,541.63
“ “ “ “ miscellaneous sources,	25,074.19

Total gross earnings,	\$2,452,935.35
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Less operating expenses as per detailed state- ment,	1,581,125.47
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Net earnings,	\$871,809.88
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Other debits as follows, viz. : —

Rent of leased roads,	\$242,017.37	
Interest for the year,	547,316.93	
		789,334.30

Surplus, credited to profit and loss account,	\$82,475.58
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SUMMARY EXHIBIT LAST TEN YEARS.

Fiscal Years.	Gross Earnings.	Net Earnings.	Dividends, per cent.
1868-69	\$1,675,238.59	\$702,540.69	8
1869-70	1,753,324.12	742,148.29	8
1870-71	1,871,637.29	635,308.66	8
1871-72	1,973,622.83	574,207.36	8
1872-73	2,229,839.28	543,141.87	..
1873-74	2,987,299.57	988,317.94	..
1874-75	2,827,290.74	757,419.13	..
1875-76	2,470,971.02	683,594.06	..
1876-77	2,508,107.51	793,317.31	..
1877-78	2,452,935.35	871,809.88	..

OFFICERS.

President. — Alfred P. Rockwell.

Master of Transportation. — John Hornby.

Treasurer. — N. G. Chapin.

Directors. — Alfred P. Rockwell, Boston, Mass. ; George S. Morison, New York City ; George P. King, Boston, Mass. ; George E. B. Jackson, Portland, Me. ; John Cummings, Woburn, Mass. ; Charles H. Dalton, Boston, Mass. ; James W. Johnson, Enfield, N. H. ; George W. Gill, Worcester, Mass. ; George Ripley, Boston, Mass.

EASTERN RAILROAD IN NEW HAMPSHIRE.

Line of Road. — Seabrook to Portsmouth, 15.9 miles. Sidings, 5 miles.

This road was chartered June 18, 1836, and opened in 1840. An additional act, approved July 2, 1839, authorized the road to be located from Salisbury, Mass., to Portsmouth, and empowered the company to lease the entire right to use said road "to such persons or corporations and upon such terms as they may deem proper"; and June 29, 1841, another act authorized the extension of the road beyond Portsmouth to connect with the Portland, Saco, and Portsmouth road, at the State line. When

completed, in 1841, the road in this State was leased to the Eastern Railroad Company of Massachusetts for the term of ninety-nine years, with the condition that the capital stock of the leased road, amounting to \$492,500, now rated at \$500,000, should be entitled to equal rate of dividends with the capital stock of the road of the lessees. By the terms of the lease of the Portsmouth, Great Falls, and Conway road to the Eastern Railroad of New Hampshire in 1871, which lease was immediately assigned to the Eastern Railroad of Massachusetts, the three roads were to be operated as a single road with but one set of books, and the combined stock of the three roads was to constitute the capital upon which the dividends were to be made. At this time, also, the Eastern Railroad, by its own act, terminated the joint contract which it had in 1841 formed with the Boston and Maine road, in which they took a lease of the Portland, Saco, and Portsmouth road, for the term of ninety-nine years. In the rupture of this contract, as the Eastern road, by the terms of the arrangement, had the right to do, it not only assumed the whole responsibilities of the lease, which required an annual rental of \$150,000, but also the payment of \$100,000 to the Boston and Maine Company as a penalty for severing the joint contract. This rupture of the joint contract, moreover, drove the Boston and Maine Company to extend its line by constructing an independent road from South Berwick to Portland, at a cost of \$3,941,323, to divide between the two parallel roads the traffic hitherto in the hands of the Eastern road. These unhappy proceedings, intensified in their disastrous effects by the depression of the business of the country, culminated in 1875 in an overwhelming complication of embarrassments, which for a time seemed destined to end in the utter ruin of the Eastern Railroad, the Eastern Railroad in New Hampshire, and, indeed, all the other roads closely concerned in the combination.

In 1876, the Eastern Railroad Company of New Hamp-

shire instituted proceedings in the courts, a *quo warranto* and an equity suit, to rescue its road from the Eastern Railroad Company. In 1877, the supreme court of this State appointed George A. Ramsdell referee to report the facts. The directors of the Eastern road of New Hampshire, in their annual report in 1878, said: "The road was originally built with funds furnished in a large part by stockholders resident in New Hampshire; the stock always has been and still is largely held by citizens and corporations of that State; the corporation's duties to the public are exercised there. The income produced by the traffic of the road will yield a net revenue quite sufficient to produce satisfactory dividends. There is no debt; and, as regards the legal proceedings in which we are engaged, your directors still believe 'that there is no reason to expect any other result than one favorable to the interests of the corporation.'

"At the last annual meeting, the corporation voted to request of the shareholders a contribution equal to one dollar for each share of stock held by them, to provide funds for the expenses of the contest in which we are engaged. The fact that the desired contribution has been paid on more than three-fourths of the shares in the company, shows not only the confidence of the shareholders in the ultimate results of our proceedings, but that they may be relied on to furnish further contributions should they be needed during the progress of the suits."

In the annual report of the company, dated June 2, 1879, the directors announce the following facts, which will give satisfaction to all who are identified with the vast interests of the Eastern Railroad line, as well as to those immediately connected as stockholders with the Eastern Railroad in New Hampshire. The directors say:—

"Since the last annual report, the directors have effected a compromise which has been duly accepted by the corporation, and leased to the Eastern Railroad Company your

railroad for a term of sixty years and two months, from October 1, 1878, at a rental equal to four and one-half per cent per annum upon the capital stock, dating back from June 1, 1877. All litigation has closed, and, so far as practicable, all bills for legal services have been paid. On the sixth day of January, a cash dividend of three and one-half per cent. and a return to contributors of the one per cent paid by them to carry on the suits, with interest, was paid. The funds on hand will pay all liabilities, and we expect hereafter to make semi-annual dividends of two and one-fourth per cent."

The settlement was in the form of a compromise, by which the Eastern Railroad Company of New Hampshire made the new lease above specified, and the Eastern Railroad Company became bound to pay to the lessors an annual rental of \$22,500, or four and one-half per cent on the capital stock, amounting to \$500,000, as will be seen, with other facts of importance in relation to this fortunately-adjusted controversy, in connection with the financial statement pertaining to the Eastern Railroad, in another part of this report.

TREASURER'S FINANCIAL STATEMENT, JUNE 26, 1878.

Dividend Fund.

June 30, 1877, by balance on hand,	\$892.00	
June 26, 1878, to payments since last report,	94.00	
Balance on hand,		\$798.00

General Fund.

June 30, 1877, by balance on hand,	\$66.78	
June 26, 1878, by contributions from shareholders, under vote passed July 10, 1877,	3,705.00	
June 26, by balance interest account,	33.25	
		\$3,805.03

June 26, to notes of corporation paid,	\$400.00	
June 26, to payments for legal services and general expenses,	844.19	
	<u>1,244.19</u>	
Balance on hand,		\$2,560.84
June 26, total cash on hand,		<u>\$3,358.84</u>

TREASURER'S FINANCIAL STATEMENT, JUNE 2, 1879.

June 26, 1878, by balance on hand,		\$3,358.84
Eastern Railroad,		22,500.00
Eastern Railroad,		11,250.00
contributions from shareholders,		9.00
interest,		60.80
		<u>\$37,178.64</u>
April 30, 1879, to dividends paid,	\$16,618.00	
dividends paid (old),	40.00	
contributions returned,	3,874.96	
legal expense,	7,856.74	
sundry expenses,	504.57	
	<u>\$28,894.27</u>	
Balance on hand,		<u>\$8,284.37</u>

OFFICERS.

President. — Moody Currier.

Treasurer. — Edward A. Abbot.

Directors. — Moody Currier, Edward A. Abbot, Edward L. Giddings, Walter Hastings, Alfred B. Hill, Francis Thompson, Dexter Richards.

PORTSMOUTH, GREAT FALLS, AND CONWAY RAILROAD.

Line of Road.—Portsmouth to Conway. Length, 71.37 miles. Sidings, 6.6 miles.

This road was originally chartered June 19, 1844, under the title of the "Great Falls and Conway Railroad," to extend from Somersworth to Conway, and was closely identified with the Great Falls and South Berwick Branch Railroad, of Maine, chartered March 31, 1841, to extend from South Berwick to the State line at Great Falls. These two corporations were authorized in 1848, by concurrent legislation of the two States, to organize into one corporation under the title of the "Portsmouth, Great Falls, and Conway Company," but do not seem to have done so, though both corporations ultimately became merged together under that name. The construction of the line was begun by the two corporations in 1848, and finished from Conway Junction to Union Village, 27 miles, in 1850. During the three years immediately preceding 1857, both companies made several issues of mortgage bonds, and in 1864 the roads were, by action of the bondholders, placed in the hands of trustees, and a new corporation, under the name of the "Portsmouth, Great Falls, and Conway Railroad Company," was chartered June 30, 1865, for the express purpose of purchasing the two roads and franchises under the mortgage sale by the bondholders, who, by the provisions of the new charter, had the right to pay eighty per cent of their subscription to the new stock in the old bonded debt. The new charter authorized the extension of the road to Conway. The construction began about 1870, and was completed from Portsmouth to North Conway, June 3, 1872, a distance of 71.37 miles. The old Great Falls and Conway road was operated, the first year after its completion to Union Village, by the Boston and

Maine Company, and subsequently by the owners till it passed into the hands of the trustees in 1864.

In 1871, when the line was about completed, it was leased for sixty years to the Eastern Railroad in New Hampshire, the lease passing at once into the hands of the Eastern Railroad Company of Massachusetts, the conditions of the lease being that the three roads should be operated as one consolidated road, with but one set of books, and participate equally in the profits in proportion to their respective interests in the combined capital stock. The Eastern Railroad Company owns \$486,000 of the funded debt, and \$551,000 of the capital stock of the Portsmouth, Great Falls, and Conway Company.

As this is one of the roads whose fortunes depend so vitally upon the management and success of the Eastern Railroad Company, and as the operations of the road are all merged in the general accounts of the lessee company, no details of the affairs can be furnished except what are embraced in the notice of the Eastern road in another part of this report. The road is maintained in a superior running condition.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Capital stock paid in,	\$1,150,300
Funded debt, 4½ per cent bonds (no floating debt),	1,000,000
Total cost of road and equipment,	<u>\$2,150,300</u>

The road is furnished by the lessees, excepting 88 merchandise cars which belong to the lessors. The annual rental under the present arrangement is \$45,000, paid semi-annually in coupons.

OFFICERS.

President. — A. P. Rockwell, Boston.

Treasurer. — N. G. Chapin, Boston.

Clerk. — William H. Hackett, Portsmouth.

Superintendent. — John W. Sanborn, Wakefield.

Directors. — A. P. Rockwell, Boston, Mass. ; S. C. Lawrence, Medford, Mass. ; R. W. Hooper, Boston, Mass. ; James W. Johnson, Enfield ; George W. Burleigh, Great Falls.

WOLFEBOROUGH RAILROAD.

Line of Road. — Wakefield to Wolfeborough on Lake Winnepesaukee. Length, 12.03 miles. Sidings, 1½ miles.

This road was chartered in 1868 ; opened in 1872. It was empowered to build a road from some point on the Great Falls and Conway Railroad in Wakefield, to the waters of the lake in Wolfeborough, the charter expressly authorizing the company to lease the road to any other corporation. In 1872, the road, with all its rights and appurtenances, was leased to the Eastern Railroad Corporation of New Hampshire, and this lease was at once assumed by the Eastern Railroad Corporation of Massachusetts. The latter-named corporation pays to the Wolfeborough Railroad Corporation, as an annual rental, six per cent on the cost (\$386,500) of the leased road, with the proviso, that, if the net earnings of the road for any one year should exceed that amount of income, one half of the excess should accrue to the lessors. The rolling stock was furnished by the lessees. The road and equipments are in good condition. The Eastern Corporation of Massachusetts owns 3,379 of the total number of 3,865 shares of the capital stock of the leased property. The lessors maintain an independent organization.

FINANCIAL STATEMENT.

Capital stock paid in,	\$386,500.00
No debt.	
Total cost road and equipment,	\$386,500.00

OFFICERS.

President. — Samuel C. Lawrence, Medford, Mass.

Treasurer. — John B. Parker, Boston, Mass.

Clerk. — John L. Peavey, Wolfeborough.

Directors. — S. C. Lawrence, Boston, Mass. ; John W. Sanborn, Wakefield ; John M. Brackett, Wolfeborough ; Joseph L. Avery, Wolfeborough ; Blake Folsom, Wolfeborough ; George W. Burleigh, Great Falls ; Thornton K. Lothrop, Boston, Mass.

PORTSMOUTH AND DOVER RAILROAD.

Line of Road. — Portsmouth to Dover. Length, 10.7 miles. Sidings, 3 miles.

This road was originally chartered December 21, 1842, the corporation being entitled the "Proprietors of the Portsmouth and Dover Railroad," authorized to build a railroad beginning at or near the depot of the Boston and Maine Railroad in Dover, and ending at any place in Portsmouth, with permission to extend a branch to Durham. The charter, which required construction to be begun as early as 1845, was in 1844 extended in its limitations to 1851, and by an amendatory act December 29, 1848, extending the time for the completion of the road to 1852, the corporation took the title of the "Portsmouth and Dover Railroad." In 1851, an act was passed authorizing the corporation to consolidate with the Cochecho Railroad Company, now the Dover and Winnepesaukee Company, which had been chartered July 2, 1847, to build a road from Dover through Rochester and Farmington to some point on the Boston, Concord, and Montreal Railroad in Gilford, Meredith, Center Harbor, or Holderness. By successive acts passed, the charter was kept alive till 1858, when it lapsed, but by an act passed July 7, 1866, it was renewed, and the time for completing the road extended to

1872; a subsequent act passed July 1, 1870, extended the time to January 1, 1878.

The road was opened February 1, 1874, and immediately on completion leased to the Eastern Railroad Company of New Hampshire, the lease being at once transferred to the Eastern Railroad Company of Massachusetts, for a term of fifty years, at an annual rental of six per cent on the cost of construction. The corporation being essentially identified in its interests with the Eastern Railroad Company, it is not possible to give any definite statement of its present condition and prospects, under the lease, other than is furnished in the statements in relation to the Eastern Railroad Company, in another part of the report. The corporation is free from debts. The cost of the road is not reported. The only items of information furnished pertaining to the condition of the road are as follows: Capital stock paid in, \$756,800; gross earnings for year ending September 30, 1877, \$20,537.94; total operating expenses, \$20,498.59; net earnings, \$39.45; rental for the year, \$41,221.67. How much, if any, of the rental was received by the lessors does not appear; probably paid in coupons.

OFFICERS.

President. — Frank Jones, Portsmouth.

Treasurer. — George L. Treadwell, Portsmouth.

Clerk. — William H. Hackett, Portsmouth.

Directors. — Frank Jones, Daniel Marcy, A. R. Hatch, William H. Sise, Portsmouth; and Oliver Wyatt, Andrew H. Young, Dover.

BOSTON AND MAINE RAILROAD.

Line of Road. — Boston, Mass., to Portland, Me., main line; length, 115.5 miles, of which 34.75 miles are in New Hampshire. Branches: Medford, 2 miles; Methuen, 3.75 miles; Great Falls, 2.75 miles. Leased: Newburyport

Railroad, 26.98 miles ; Danvers Railroad, 9.26 miles ; Dover and Winnepesaukee Railroad, 29 miles ; West Amesbury Railroad, 4.5 miles ; Lowell and Andover Railroad, 8.73 miles. Total length of road belonging to the company, 126.50, of which 37.5 miles are in New Hampshire. Total length of leased roads, 78.47 miles, of which 31.25 miles are in New Hampshire. Total miles operated by the company, 202.2 miles, of which 68.75 miles are in New Hampshire. Length of double main track, 78.41 miles ; aggregate sidings, etc., 71 miles.

This road was formed January 1, 1842, by consolidation of the Boston and Portland road, chartered in Massachusetts, March 15, 1833 ; the Boston and Maine, chartered in New Hampshire, June 27, 1835 ; and the Maine, New Hampshire, and Massachusetts, chartered in Maine, March, 1836 ; opened to Dover in 1841, and to Portland in 1873. The Portland, Saco, and Portsmouth Railroad, which was opened to Portland in 1842, was leased to the Boston and Maine and the Eastern Railroad Companies for their joint use in 1841, for a term of ninety-nine years, at an annual rental of six per cent on a capital stock of \$1,500,000. In 1871, this joint lease was terminated by the withdrawal of the Eastern Company, who were required to pay to the Boston and Maine Company \$100,000 as damages for breaking the contract, the Eastern Company at the same time assuming the lease individually for ninety-nine years, at an annual rental of ten per cent on the capital stock of \$1,500,000. The Boston and Maine Company thereupon proceeded to extend that line from South Berwick to Portland, completing the extension in 1872, at a cost of \$3,941,323, a distance of forty-two miles. This has been a dividend-paying company from 1838, the stockholders having received an average of about eight and one-half per cent annually on the capital stock, the two dividends last year amounting to six per cent. This company pays as rent for the use of the Dover and Winnepesaukee Railroad

six per cent annually on \$480,000, with \$200 to maintain the organization of the lessors—\$29,000; five per cent per annum on \$114,000, as rent to the West Amesbury branch—\$5,700; and seven per cent per annum on \$750,000, as rent for the Lowell and Andover road—\$52,500.

CASUALTIES.

The accidents on the road within the limits of New Hampshire, during the year, were as follows:—

December 13, 1877, James McArdle, while walking on the track near Great Falls, was struck by the passenger train and killed.

June 1, 1878, William Hoyt, deaf and dumb, while crossing the track near Rochester, was struck by the hand-car, and somewhat injured.

June 25, 1878, O. P. Dudley, while crossing the track near Lamprey-river bridge, was struck by the passenger train and injured so that he died in a few days.

July 12, 1878, John Griffin jumped off the freight train, near South Newmarket, and had his foot cut off. He died from the effects of his injuries. He was stealing a ride.

FINANCIAL STATEMENT, YEAR ENDING SEPTEMBER 30, 1878.

Capital stock,	\$7,000,000.00
Capital paid in,	6,921,274.52
Funded debt,	3,500,000.00
Floating debt,	22,009.08
Total floating and funded debt,	3,522,009.08
Total cost of road and equipment,	10,755,445.54

Expenditures.

Operating expenses,	\$1,359,367.72
Aggregate rental for use of other roads,	87,200.00
Total expenditures,	\$1,446,567.72

Income.

From passengers,	\$1,260,673.87	
freight,	760,248.56	
mails,	24,446.23	
expresses,	55,372.72	
all other sources,	62,917.87	
Interest,	20,800.21	
Total income,		\$2,184,458.96
Net earnings,		\$737,891.24

Dividends and Surplus.

Two semi-annual three per cent		
dividends on stock,	\$420,000.00	
Interest, seven per cent, on debt,	247,542.12	
Surplus not divided,	70,349.12	
		\$737,891.24
Total surplus fund,		\$1,502,226.29

SUMMARY EXHIBIT FOR LAST TEN YEARS.

Fiscal Years.	Gross Earnings.	Net Earnings.	Dividends.	Per cent.	Surplus.
1868-69	\$1,871,339.02	\$549,949.22	\$450,000	10	\$1,000,420.41
1869-70	1,876,390.31	613,860.70	450,000	10	760,818.81
1870-71	1,994,689.23	574,116.94	400,000	8	1,012,570.29
1871-72	2,004,671.83	462,645.83	500,000	10	1,016,686.48
1872-73	2,300,093.68	689,564.73	560,000	8	1,018,277.70
1873-74	2,421,799.27	962,030.12	560,000	8	1,018,277.70
1874-75	2,388,740.18	841,018.61	560,000	8	1,018,277.70
1875-76	2,370,619.53	866,000.88	420,000	6	1,369,449.63
1876-77	2,267,019.43	756,636.81	350,000	5	1,433,148.70
1877-78	2,184,458.96	737,891.24	420,000	6	1,502,226.29

OFFICERS.

President. — Nathaniel G. White.

Treasurer. — Amos Blanchard.

General Superintendent. — James T. Furber.

Directors. — Nathaniel G. White, Lawrence; George C. Lord, Boston; Amos Paul, South Newmarket; Nathaniel

J. Bradlee, Boston ; William S. Stevens, Dover ; James R. Nichols, Haverhill ; John Felt Osgood, Boston ; Samuel E. Spring, Portland, Me. ; Nathaniel W. Farwell, Lewiston, Me.

DOVER AND WINNIPESAUKEE RAILROAD.

Line of Road.—Dover to Lake Winnepesaukee at Alton Bay, 29 miles.

The Dover and Winnepesaukee Railroad Company, authorized to construct a railroad from Dover to Alton Bay, was chartered July 2, 1839 ; but, as the company did not, according to the conditions of the organic act, begin the work of construction prior to September, 1847, the charter lapsed. Precisely eight years after the incorporation of this company, a second charter, July 2, 1847, was granted to a company under the name of the "Cocheco Railroad Company," authorized to build a road from Dover through Rochester and Farmington, terminating at some point on the line of the Boston, Concord, and Montreal Railroad in Gilford, Meredith, Center Harbor, or Holderness, and under this title the construction of the road was begun in 1849, and completed from the line of the Boston and Maine Railroad in Dover to Alton Bay, and opened for traffic September, 1851.

In 1863 the corporation was re-organized under the title of the "Dover and Winnepesaukee Company," who at the same time leased the road for fifty years to the Boston and Maine Railroad Company, at an annual rental of 6 per cent on the capital stock of the company representing the cost of the road, — \$480,000, — and the annual sum of \$200 to maintain the organization of lessor company, a total annual rental of \$29,000. The lessees owned \$263,144.48 of the stock of the leased road at the time of the lease, and still continue to hold the same. The road, like all the rest of

the line of the Boston and Maine Railroad Company, is maintained in first-class order. The whole cost of the road and equipments was returned in 1874 as \$825,000. The Dover and Winnepesaukee Railroad Company make a regular semi-annual dividend of three per cent on its capital stock. The operating expenses and the earnings of the road are embraced in the general accounts of the Boston and Maine Railroad Company.

OFFICERS.

President. — William Hale, Dover.

Treasurer and Clerk. — George W. Benn, Dover.

Directors. — William Hale, Dover; William Hill, North Berwick, Me.; John McDuffee, Rochester; Samuel A. Walker, Boston, Mass.; C. W. Woodman, Dover; Amos Paul, South Newmarket; Charles Woodman, Dover.

WEST AMESBURY BRANCH RAILROAD.

Line of Road. — Newton, N. H., to West Amesbury, Mass. Length, 45 miles, of which 2.25 miles are in New Hampshire.

This road was chartered in New Hampshire, June 30, 1868. The company was authorized to build a road from the West Amesbury Branch road at the State line to Newton, N. H., on the Boston and Maine Railroad. The road was opened January 9, 1873, and at the same time leased to the Boston and Maine Railroad Company, at an annual rental of \$5,700. The following financial statement shows the condition of the corporation.

FINANCIAL STATEMENT FOR YEAR ENDING SEPT. 30, 1878.

Assets.

Cost of road,		\$114,000.00
Grading and masonry,	\$31,800.00	
Bridging,	4,000.00	
Superstructure, including rails,	60,000.00	
Land, land-damages, and fences,	9,200.00	
Passenger and freight stations, wood-sheds, and water-stations,	6,500.00	
Engine-houses, car-sheds, and turn-tables,	2,500.00	
Cash,		173.71
Total assets,		\$114,173.71

Liabilities.

Capital stock paid in,		\$57,000.00
Authorized by charter,	\$150,000.00	
Authorized by vote of company,	114,000.00	
Issued (number of shares 570).		
Funded debt:—		
Bonds due July 1, 1893, rate of interest 7 per cent,		57,000.00
Unfunded debt (dividends unpaid),		14.00
Surplus,		159.71
Total liabilities,		\$114,173.71

Copy of Profit and Loss Account for the Year.

CR.

By balance September 30, 1877,	\$203.61
rent received from the Boston and Maine Railroad Co.,	5,700.00
	\$5,903.61

DR.	
To taxes,	\$146.40
general expenses,	40.00
interest accrued,	3,990.00
dividends declared ($2\frac{1}{4}$ per cent),	1,567.50
balance September 30, 1878, carried forward,	159.71
	\$5,903.61

OFFICERS.

President. — William H. Haskell.

Treasurer. — John S. Poyen.

NASHUA AND LOWELL RAILROAD.

Line of Road. — Nashua to Lowell, Mass. Length, 14.5 miles double track, of which 5.25 miles are in New Hampshire. Sidings, etc., 7.35 miles. Leased: Stony Brook Railroad, North Chelmsford, Mass., to Ayer, Mass., 13.16 miles; Wilton Railroad, 15.5 miles; Peterborough Railroad, 10.5 miles; total length of leased roads, 39.16 miles, of which 31.25 miles are in New Hampshire; total length of line operated by the company, 53.66.

This road was chartered in New Hampshire, June 23, 1835; in Massachusetts, April 16, 1836; opened in 1838. Under authority of a legislative act passed in New Hampshire June 26, 1838, a contract was formed between the Nashua and Lowell Railroad Company and the Boston and Lowell Railroad Company in 1858, in which it was agreed that the two lines, including branches and leased roads, should be jointly operated as one consolidated interest for the period of twenty years, — the net revenue to be divided in the proportion of 69 per cent to the Boston and Lowell, and 31 per cent to the Nashua and Lowell Company. The Peterborough Railroad was not included in this original contract, as it was not then built. There was an effort

made some five years ago to secure the consolidation of these two contracting companies into one corporation, and the requisite legislation was secured, but the companies did not take any action towards acceptance of the acts, leaving the legislation to become void by the expiration of the time specified in its limitations for acceptance. The partnership which had existed some more than twenty years between the two roads was dissolved December 1, 1878, since which time this road, with its leased lines, has been operated separately. No dividend was made last October, but a dividend of three per cent, covering the six months ending with the thirty-first of March, was declared and made payable the first of May, 1879.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Capital stock,		\$800,000.00
Funded debt,	\$200,000.00	
Floating debt,	213,000.00	
Total,		\$413,000.00
Total cost road and equipments,		1,148,738.77
Assets held by corporation in addition to cost of road,		232,788.55
Total expenditures for working road,		386,088.14
Total earnings,		440,658.39
Net income,		54,570.20
Dividend, 3 per cent,	\$24,000.00	
Interest on debt, 5 per cent,	20,021.05	
Surplus,	10,549.15	
		54,570.20
Total surplus,		99,762.61

Included in the income of this company is an aggregate sum of \$44,346.28 received from the six railroads, — the Wilton, Peterborough, Stony Brook, Salem and Lowell, Lowell and Lawrence, and the Middlesex Central, for use of land and right of way over this road.

BALANCE-SHEET, APRIL 1, 1879.

Dr.			Cr.
Road-bed and real estate,	\$300,609.11	Capital stock,	\$800,000.00
Superstructure,	173,712.65	Gold bonds,	200,000.00
Buildings and bridges,	180,628.12	Notes payable,	213,000.00
Freight houses in Boston,	95,325.00	Unclaimed dividends,	715.00
Drake estate,	1,450.00	Dividend No. 77 payable May 1,	24,000.00
Canal-street block,	5,811.11	Received from cashier B. & L. and	
Real estate, Forge Village,	1,600.00	N. & L. R. R., two months' rent-	
Batchelder land, Nashua,	5,000.00	al Peterborough R. R.,	5,712.00
Mystic-river quay,	185,942.73	Received on account of current	
Engine-house, Lowell,	3,617.63	earnings, after April 1,	12,000.00
Engines,	72,900.00	Contingent fund,	126,100.32
Passenger and baggage cars,	41,300.00		
Freight cars,	82,775.00		
Working materials,	41,432.02		
Machinery and shop tools,	15,336.03		
Road tools,	3,704.57		
Furniture,	2,500.85		
Due from B. & L. and N. & L. R. R.,	23,694.76		
Due from B. & L. R. R., use of			
property in Boston, mail re-			
ceipts, etc.,	5,369.18		
Boston & Lowell R. R., on account			
of Middlesex Central R. R.,	2,574.32		
Trustees for sinking funds for re-			
demption of Ogd. & L. C. R. R.			
bonds,	3,295.13		
Notes receivable,	105,500.00		
Cash,	27,449.11		
	<u>\$1,381,527.32</u>		<u>\$1,381,527.32</u>

SUMMARY EXHIBIT LAST TEN YEARS.

Years.	Gross Earnings.	Net Earnings.	Dividends.	Per Cent.
1869-70	\$494,376	\$80,170	\$72,000	9
1870-71	544,613	102,415	80,000	10
1871-72	587,899	86,914	80,000	10
1872-73	611,846	83,452	80,000	10
1873-74	590,147	75,543	72,000	9
1874-75	518,319	56,465	.....	..
1875-76	502,025	.....	16,000	2
1876-77	507,047	35,188	32,000	4
1877-78	510,545	47,774	32,000	4
1878-79	440,658	54,560	24,000	3

OFFICERS.

President. — Francis A. Brooks, Boston.

Treasurer. — C. V. Dearborn, Nashua.

Superintendent. — Charles E. Paige, Lowell.

Directors. — Francis A. Brooks, Francis V. Parker, Boston; J. W. White, C. V. Dearborn, W. W. Bailey, F. A. McKean, Nashua.

WILTON RAILROAD.

Line of Road.—Nashua to Wilton. Length, 15.48 miles. Sidings, 1 mile.

This road was chartered December 28, 1844. The company was authorized to construct a road from the Concord Railroad, between Souhegan River and the junction of the Concord with the Nashua and Lowell Railroad, through Wilton, Greenfield, or Peterborough center village to Marlow; or from the south line of the State near Nissitisset River through Wilton, Greenfield, or Peterborough center village to Marlow. The road was completed to Wilton in 1851. The extension of the line to Greenfield and Peterborough was committed to the Peterborough Railroad Company, chartered July 7, 1866, and was finished to Greenfield in 1874.

In 1873 the Wilton road was leased to the Nashua and Lowell Railroad Company for a term of 20 years from April 1, 1873, at an annual rental of 7 per cent on the capital stock of the company, which was not to exceed \$250,000, and the rental in no case to be at a higher percentage than that of the dividend earned by the Nashua and Lowell Railroad Company. This is one of the few railroads of the State which from first to last has been in a marked degree successful in all its operations. The capital stock, representing the cost of the road, has not risen to the maximum amount fixed in the lease on which to estimate the rental. In 1872 the cost of road and equipments was stated at \$234,000, and the rental at $6\frac{1}{2}$ per cent, \$14,052. For the year ending September 30, 1878, the total cost of road and equipments is given as \$242,600, and total rental \$14,130.

FINANCIAL STATEMENT FOR YEAR ENDING SEPT. 30, 1878.

Capital stock paid in,	\$233,000.00
Total cost of road and equipments,	\$242,600.00

Rental for the year,	\$14,180.00	
Income from all other sources,	379.25	
	\$14,509.25	
Total expenses,	38.75	
Net income,		\$14,470.50
Dividends, 6 per cent,	\$13,980.00	
Surplus,	490.50	
		\$14,470.50
Total reserved earnings,		\$9,600.00

BALANCE-SHEET, APRIL 25, 1879.			
Dr.			Cr.
Road-bed and superstructure,	\$228,352.82	Capital stock,	\$233,000.00
Depot buildings,	14,247.18	Reserved earnings,	9,600.00
Cash,	8,208.45	Unclaimed dividend,	586.50
		Dividend No. 60 (unpaid),	6,990.00
		Contingent fund,	631.95
	\$250,808.45		\$250,808.45

OFFICERS.

President. — Solomon Spalding.

Treasurer. — C. V. Dearborn.

Directors. — Solomon Spalding, C. C. Boutwell, William Ramsdell, John Reed, John A. Spalding.

WORCESTER AND NASHUA RAILROAD.

Line of Road. — Main line, Worcester to Nashua. Length, 48.81 miles, of which 6.63 miles are in New Hampshire. Leased: Nashua and Rochester Railroad, Nashua to Rochester, 48.39 miles. Total length of line operated by company, 94.5 miles; total length in New Hampshire, 55 miles. Double track, main line, Worcester to Clinton, 16.83 miles; sidings, 13.79 miles. Leased line sidings, 4.15. Total length of steel rails in tracks belonging to this company, 14.25 miles.

This railroad company is a consolidation of the Worces-

ter and Nashua Railroad Corporation, chartered in Massachusetts about 1842, to extend from Worcester to the State line at Dunstable, and of the Groton and Nashua road, chartered in New Hampshire December 24, 1844, to extend from the vicinity of Dunstable to Nashua village. The act in the New Hampshire legislature, authorizing the consolidation, was passed June 26, 1845, and the action of the stockholders consummating the union, making the two corporations one, took place November 6, 1846, the new corporation retaining the name of the Worcester and Nashua Railroad Company. The entire line from Worcester to Nashua was opened December 18, 1848.

Soon after the consolidation of the old Portsmouth and Rochester and the Nashua and Epping Companies into one corporation, under the title of the Nashua and Rochester Railroad Company, in 1868, the Worcester and Nashua corporation entered into an agreement with the consolidated company, that, when their road should be completed, the Worcester and Nashua Company should take a lease of the new road at an annual rental of six per cent on the cost of the road, paying the taxes.

This contract was put into the form of a lease, for the term of fifty years, in 1872; and in April, 1877, the cost of the road upon which the rent is based was fixed at \$2,000,000. The sum of \$700,000 in mortgage bonds, issued by the Nashua and Rochester Company, are guaranteed principal and interest by the Worcester and Nashua Company, and the interest on these bonds is paid directly to the holders of them from the treasury of the Worcester and Nashua Company, as also the dividends to the stockholders. These two roads are essentially one corporation, the stockholders being mainly the same in both companies, and the Worcester and Nashua Company being itself a heavy stockholder in the other road.

The first dividend of this corporation was paid in 1851, and from that time down to the present time the annual

dividends have been on an average about eight per cent on the capital stock paid in, free from taxes, — the average annual dividend from 1866 to 1876 being eleven and one-half per cent, free from taxes. In addition to those dividends, from the net income of the road has been used the sum of \$483,234.37 in liquidation of construction and equipment debt.

FINANCIAL STATEMENT, YEAR ENDING MARCH 31, 1879.

Capital stock paid in, for which certificates were issued,	\$1,425,235.00
Capital stock paid in for stock surrendered to the company,	101,655.00
Earnings credited to capital stock to bring shares up to par,	262,909.00
Total credited to capital stock,	<u>\$1,789,800.00</u>
Number of shares issued, 17,898.	
Total cost of road,	\$2,136,479 00
Total cost of equipment,	390,086.00

Debts.

Bonds due 1881, six per cent,	\$75,000.00
Bonds due 1887, six per cent,	275,000.00
Bonds due 1893, seven per cent,	250,000.00
Bonds due 1895, seven per cent,	400,000.00
Total funded debt,	<u>\$1,000,000.00</u>
Bills payable,	\$94,593.72
All other debts,	22,430.12
Total unfunded debt,	<u>117,023.84</u>
Total indebtedness,	<u>\$1,117,023.84</u>

Assets.

Materials for operating the road,	\$59,679.59	
Cash,	17,554.70	
Nashua and Rochester Railroad		
stock,	475,300.00	
Sundry accounts,	57,490.79	
Total assets,		610,025.08
Excess of indebtedness over assets,		\$506,998.76
Total income for the year,		\$508,396.75
Total expenses operating the road,		304,888.73
Net earnings,		203,508.02
Interest paid,	\$71,341.03	
Rental Nashua and Rochester		
Railroad,	120,448.00	
Surplus,	11,718.99	
		203,508.02
Net income, direct and indirect, from leased		
road,		\$63,192.91

The last annual report of the company, in relation to these figures, says :—

“The decrease of \$20,487.08 in the gross income of the road during the twelve months covered by this report, compared with the preceding twelve months, is more than equaled by the \$35,096.50 decrease in the operating expenses, showing a net gain of \$14,603.41 in favor of the twelve months ending September 30, 1878. Retrenchment and economy have been extended to all the departments where a saving could be made without affecting the efficiency of the service required in operating the road, or neglecting the permanent property of the company.”

The road-bed and track from Worcester to Rochester have been kept in thorough repair, requiring 684 tons of

new iron rails, and the rolling stock has been kept in corresponding good condition.

BALANCE-SHEET, SEPTEMBER 30, 1878.

DR.		CR.	
Cost of road, including viaduct,	\$2,136,479.71	Capital stock,	\$1,789,800.00
Cost of equipment,	390,086.03	Bonds payable,	1,000,000.00
Cash,	17,554.70	Bills payable,	94,593.72
Sundry accounts,	57,490.79	Profit and loss,	229,766.98
Materials for working the road,	59,679.59	Accounts due sundry persons,	22,430.12
Nashua and Rochester Railroad stock,	475,300.00		
	<u>\$3,136,590.82</u>		<u>\$3,136,590.82</u>

OFFICERS.

President. — F. H. Kinnicutt, Worcester, Mass.

Treasurer. — T. W. Hammond, Worcester, Mass.

Superintendent. — C. S. Turner, Worcester, Mass.

Directors. — F. H. Kinnicutt, Worcester, Mass. ; Stephen Salisbury, Worcester, Mass. ; Thomas Chase, Nashua ; Francis H. Dewey, Worcester, Mass. ; Isaac Davis, Worcester, Mass. ; C. B. Hill, Nashua ; J. Edwin Smith, Worcester, Mass. ; Charles H. Waters, Groton, Mass. ; John D. Bryant, Boston.

NASHUA AND ROCHESTER RAILROAD.

Line of Road. — Nashua to Rochester. Length, 48.39 miles.

This road grew out of the Nashua and Epping Railroad, chartered December 29, 1848, and the Portsmouth and Rochester road, subsequently chartered. These two charters were consolidated June, 1867, the new organization taking the title of the Nashua and Rochester Railroad Company. The road was opened November 24, 1874. Soon after beginning the construction of the road, the corporation entered into an agreement with the Worcester

and Nashua Railroad Company, that when completed the road should be leased to the latter-named company for a term of fifty years, at an annual rental of six per cent on the cost of the road, and \$200 annually to maintain the organization of the lessors, the lessees paying also the taxes. Of the capital stock, \$200,000 was taken by the Worcester and Nashua Railroad Company, \$200,000 by the city of Nashua, and \$100,000 by the Portland and Rochester Railroad Company. The six per cent bonds issued by the company (\$700,000) are guaranteed principal and interest by the lessees. The entire cost of the road was about \$2,000,000. The rent, in the form of dividends and interest, is paid directly to the holders of the stock and bonds of the leased road. This line opened a new and direct line between New England and the West, via Nashua and Worcester, from which the large anticipations have not been realized. The operations of the road being embraced in the general accounts of the Worcester and Nashua Company, no detailed statement can be given of the actual business of the leased road. For the year ending September 30, 1877, it was as follows: Gross earnings, \$95,932.21; operating expenses, \$52,654.13; net earnings, \$43,278.08; rental, \$116,725; deficit, \$73,446.92.

FINANCIAL STATEMENT, YEAR ENDING SEPTEMBER 30, 1878.

Capital stock paid in,	\$1,305,800.00
Funded debt,	700,000.00
Floating debt,	3,816.57
Total cost of road and equipment to date,	2,009,571.37
Total income,— six per cent on cost of road, capital stock, and funded debt,	120,448.00
Dividend, six per cent on stock,	\$78,348.00
Interest on debt,	42,000.00
Expenses,	100.00
Total,	\$120,448.00

BALANCE-SHEET, FEBRUARY 1, 1879.

Dr.			Cr.
Engineering department,	\$53,049.55	Capital stock,	\$1,305,800.00
Fencing,	46,160.47	Bonds payable,	700,000.00
Bridges,	75,760.78	Worcester and Nashua Rail-	
Superstructure,	496,145.97	road Company,	3,816.57
Stations, buildings, and fixtures,	46,086.33		
Discount on bonds,	68,542.50		
Commission on bonds,	448.75		
Taxes and insurance,	1,204.54		
Land and land damages,	91,677.50		
Miscellaneous expenses,	26,297.02		
Interest on assessments,	80,796.48		
Gradation and masonry,	881,734.59		
Interest,	141,667.88		
Cash,	35.24		
Robie,	9.96		
	\$2,009,616.57		\$2,009,616.57

OFFICERS.

President. — F. H. Kinnicutt, Worcester, Mass.

Treasurer. — T. W. Hammond, Worcester, Mass.

Directors. — F. H. Kinnicutt, C. W. Waters, J. C. Eastman, F. H. Dewey, E. B. Stoddard, Charles W. Smith, Charles E. Whiting, A. H. Dunlap, Aaron W. Sawyer, J. C. Burleigh, G. P. Prescott, Edwin Wallace, C. S. Turner, Charles Holman.

ASHUELOT RAILROAD.

Line of Road. — Keene to South Vernon, Vt. Length, 24 miles. Sidings, 1.9 miles.

This road was originally chartered December 27, 1844, with the design of a consolidation with the Brattleborough and Fitchburg Railroad, chartered in Vermont, October, 1843, and the Massachusetts and Vermont, chartered in Massachusetts, January, 1844, the aim being to connect Keene and Brattleborough with the Fitchburg, by the several roads to be combined, into a single organization. This plan failed; and July 10, 1846, the charter having been surrendered, a new charter was granted authorizing the construction of a

road from the Cheshire road in Keene down the Ashuelot River, to connect in Hinsdale with any railroad that might be built in the Connecticut valley through that town.

The construction of the road was begun in 1849 and completed in 1851. During the years prior to 1861, the company became so embarrassed that the owners of \$231,800 of the \$441,800 capital stock paid in surrendered their stock to the company in order to be relieved from personal liability; and in this same period, J. H. Elliott of Keene, in the interest of the Cheshire Railroad Company, became the holder of \$165,000 of the total amount of \$200,000 outstanding mortgage-bonds of the Ashuelot road. As a result, the road in 1860, under legal process, was placed in the hands of J. H. Elliott as trustee of the bondholders, and by him immediately, January 1, 1861, leased to the Cheshire Company, under stipulations by which the lessees were to operate the road and render the net profits of the operation as the rental. Under this lease the road was operated, till, after a long and determined struggle in the courts, the stockholders of the Ashuelot Company succeeded, April 20, 1877, in regaining possession of their road. The Ashuelot Company subsequently filed a bill in equity seeking to compel the Cheshire Railroad Company, and J. H. Elliott, trustee, to account to the Ashuelot Company for the use of their road from January 1, 1861, to April 20, 1878, in the sum of \$250,000, and this suit is pending in the courts. A suit brought by the Cheshire against the Ashuelot Company, some time ago, has been settled the past year, under verdict of the court, in favor of the plaintiff, who was awarded \$5,000 in full for all its claims, which were very much larger in amount than the award.

Soon after resuming possession of their road in 1877, the Ashuelot Company leased the road to the Connecticut River Railroad Company of Massachusetts, under terms by which the lessees operate the road under the management of the lessors.

FINANCIAL STATEMENT.

Capital stock authorized,		\$500,000.00
paid in,	\$441,000.00	
surrendered and		
extinguished,	231,000.00	
actually existing,	—————	\$210,000.00
Funded debt,		8,000.00
Cost of road and equipment,		555,01.872

The bonds against this road were paid from the proceeds of a judgment in favor of the company against J. H. Elliott, trustee, and the Cheshire Railroad Company, and from the proceeds of stock issued by the Ashuelot Company.

OFFICERS.

President. — A. B. Harris.

Treasurer. — E. F. Lane.

Directors. — F. F. Lane, E. F. Lane, Keene; Oscar Edwards, Northampton, Mass.; A. B. Harris, J. A. Rumrill, Tilly Haynes, Springfield, Mass.

CHESHIRE RAILROAD.

Line of Road. — South Ashburnham, Mass., to Bellows Falls, Vt. Length, 53.62 miles, of which 42.81 miles are in New Hampshire. Leased: Vermont and Massachusetts Railroad, Fitchburg to South Ashburnham, 10.5 miles. Total length of line operated by company, 64.12 miles.

This road was chartered by New Hampshire and Massachusetts in 1844; opened to Keene in 1848; to Bellows Falls in 1849. The lease of the portion of the Vermont and Massachusetts Railroad from South Ashburnham to Fitchburg, a distance of 10.5 miles, is for the joint use of the two companies, the Cheshire Company paying for such joint use of track and terminal facilities the sum of \$54,000 per annum. Till April, 1877, the company had since 1861

operated the Ashuelot Railroad, from Keene to South Vernon, Vt., a distance of 23.75 miles, under a lease from the trustee of the mortgagees, the Cheshire Railroad Company rendering to the trustee the net profits of the road as rent.

The suit which the Cheshire Company brought against the Ashuelot some time ago was ended last June in a judgment for the plaintiff in the sum of \$5,000, in full satisfaction of all its claims against the Ashuelot Company, — a much smaller sum than the plaintiff expected. The board of directors during the past year have met with great success in the sale of bonds due in twenty years from July 1, 1878, to meet the payment of bonds amounting to \$586,400, which mature in 1880. The sale of the new bonds and exchange of them for those of 1880 began at par, but soon went above par, the new issue being all taken except a portion reserved for special purposes.

The Western through business of the road showed an increase during the year, but the reduced rates of transportation prevented increase of earnings. Nor were the local traffic and the passenger transportation more encouraging.

In 1878 the company put into track 500 tons steel rails, and have purchased 500 tons to be laid this year. This will leave but 1,100 tons more to be laid to cover the entire main track with steel. During the year, 565 tons iron rail was taken up, repaired, and replaced. The rolling stock is in fair condition, except the freight cars, some of which will soon need to be rebuilt. The station buildings need repairs to some extent, and it is thought that some of the small locomotives should be exchanged for heavier ones.

CASUALTIES.

One brakeman lost a hand in coupling cars, and one brakeman was killed by his head coming in contact with the stone arch of Keene depot.

FINANCIAL STATEMENT FOR YEAR ENDING OCT. 1, 1878.

Capital stock, 533 original shares,	\$53,300.00
21,000 preferred shares,	2,100,000.00
Funded debt,	836,500.00

Earnings.

From passengers,	\$135,389.69
freight,	361,756.90
mails, express, etc.,	22,057.03
Total earnings,	<u>\$519,203.62</u>
Total operating expenses,	<u>441,711.40</u>
Net income,	\$77,492.22
Interest paid, including that on bonds,	<u>45,458.80</u>
Balance of earnings,	<u>\$32,033.42</u>

TRIAL BALANCE, MARCH 1, 1879.

Dr.			Cr.
Cash and cash assets,	\$66,828.75	Capital stock,	\$2,153,300.00
Construction account,	2,717,535.26	Bonds due July 1, 1880,	580,900.00
Material for repairs, fuel, iron,		Bonds due January 1, 1877,	100.00
etc., on hand,	277,013.77	Interest due,	2,274.00
Bills receivable,	32,183.05	On earnings account,	99,729.04
		Dividends unpaid,	2,038.00
		Bonds due July 1, 1896,	250,000.00
		Profit and loss,	3,953.74
		Interest,	1,266.05
	<u>\$3,093,560.83</u>		<u>\$3,093,560.83</u>

INDEBTEDNESS OF THE COMPANY.

	Oct. 1, 1878.	April 1, 1879.
Unclaimed div. and coupons,	\$26,312.00	\$1,993.00
Bonds due July 1, 1896,	250,000.00	250,000.00
Bonds due January 1, 1877,	100.00	100.00
Bonds due July 1, 1880,	586,400.00	580,900.00
	<u>\$862,812.00</u>	<u>\$832,993.00</u>
Less by cash and cash assets on hand,	145,718.75	96,692.80
Balance indebtedness,	<u>\$717,093.25</u>	<u>\$736,300.20</u>

SUMMARY EXHIBIT LAST TEN YEARS.

Years.	Gross Earnings.	Net Earnings.	Dividends.	Capital Stock.
1868-69	\$713,526	\$151,111	\$110,576	\$2,085,925
1869-70	740,105	101,247	44,210	2,085,925
1870-71	787,815	157,649	107,692	2,153,300
1871-72	824,763	183,851	105,000	2,153,300
1872-73	849,086	241,572	105,000	2,153,300
1873-74	750,608	183,068	105,000	2,153,300
1874-75	658,373	101,047	84,000	2,153,300
1875-76	586,731	141,461	.....	2,153,300
1876-77	517,543	125,936	21,000	2,153,300
1877-78	519,204	77,492	.....	.....

OFFICERS.

President. — William A. Russell, Lawrence.

Treasurer. — F. W. Everett, Boston.

General Manager. — R. Stewart, Keene.

Directors. — William A. Russell, Ephraim Murdock, Jr., Samuel Gould, George F. Williams, John B. Meer, Edward C. Thayer, James H. Williams.

FITCHBURG RAILROAD.

Line of Road. — Boston to Fitchburg, 50.68 miles, double track. Branches: Watertown Branch Railroad, 6.60 miles; Lancaster and Sterling Branch, 12.42 miles; Peterborough and Shirley Railroad, 23.62 miles. Total length of line belonging to the Fitchburg Railroad Company, 93.32 miles. Total side and other tracks belonging to company, 45.37 miles. Aggregate length of tracks belonging to company, 189.37 miles. Leased road: Vermont and Massachusetts Railroad and branches, 80.11 miles; double track, 10.39 miles. Side tracks, 20.63 miles. Total length line owned and operated, 173.43 miles.

The Fitchburg Railroad Company was chartered March 3, 1843; road opened from Boston to Waltham, December 20, 1843; completed to Fitchburg, March 5, 1845. All the branches were built under separate charters, and subse-

quently consolidated with the Fitchburg road. The Vermont and Massachusetts road extends from Fitchburg to Brattleborough, 69 miles, with a branch to Greenfield, 8 miles, and another small branch at Turner's Falls.

This road and its equipments have been very much improved the past year, involving extraordinary expenditures, in consequence of the completing of the tunnel, which has changed the business from a mainly local to a through Western traffic, in a very great degree. During the year 1,700 tons of steel rails have been put into the track, and 1,620 tons of iron.

The Peterborough and Shirley Railroad Company was chartered in New Hampshire, July 8, 1846, authorized to build a road "from the State line in Mason through New Ipswich to Peterborough," a distance of 9.37 miles. The construction was begun in 1849, and finished about 1851. In the years immediately preceding 1861, the whole road, including the Massachusetts division, became so embarrassed in its finances that the stock was nearly all purchased at nominal prices by parties who in 1861 transferred the whole road with all its franchises and property to the Fitchburg Company, by a lease for 999 years, the lessees paying the interest on the funded debt, and an annual rental of 6 per cent on the capital stock, which was nearly all in the hands of the Fitchburg Company, the whole New Hampshire section of the road being virtually thrown into the transfer as a gratuity, on condition that the running of the road should be continued.

The capital stock of the road was increased from \$4,000,000 to \$4,500,000 during the year, and the funded debt was increased from \$500,000 to \$1,000,000. Though the business of the road increased 20 per cent over the previous year, the net earnings, in consequence of the extraordinary improvement of the road and equipments, decreased \$32,987.43. The gross income from passengers, freight, mails, expresses, and rent of property, has increased

\$58,191.67, and the operating expenses, exclusive of rents and interest, \$46,239.48.

FINANCIAL STATEMENT FOR YEAR ENDING SEPT. 30, 1878.

Receipts.

From passengers,	\$644,326.53	
freight,	1,091,515.88	
express,	27,582.15	
mails,	30,912.42	
rent of property,	24,820.81	
	<u>\$1,819,157.29</u>	
Premium on bonds,	11,312.50	
Rent of roads,	107,464.06	
	<u></u>	
Total earnings,		\$1,937,933.85

Expenditures.

Total operating expenses,	\$1,354,621.40	
Rent of road, Vermont and Massachusetts Railroad,	231,941.50	
Rent of road, Connecticut River Railroad,	3,750.00	
Interest on bonds,	65,000 00	
Interest, other,	28,854.53	
	<u></u>	
Total expenses,		\$1,684,167.43
		<u></u>
Net earnings,		\$253,766.42

GENERAL BALANCE, SEPTEMBER 30, 1878.

Dr.			Cr.
Construction accounts,	\$5,041,365.92	Capital stock,	\$4,500,000.00
Cash and cash funds,	180,861.77	Bonds,	1,000,000.00
Real estate,	292,269.81	Notes payable,	486,000.00
Stock materials,	251,839.65	Due connecting roads,	9,827.92
Fuel,	44,067.47	Vermont and Massachusetts Railroad Company,	92,308.40
Improvements Vermont and Massachusetts Railroad,	639,018.39	Unclaimed dividends,	7,963.00
Sinking fund,	138,559.15	Coupons No. 2,	15,000.00
Uncollected freight,	38,962.52	Coupons No. 9,	17,500.00
		Suspense accounts,	3,900.00
		Profit and loss,	494,435.36
	<u>\$6,626,934.68</u>		<u>\$6,626,934.68</u>

OFFICERS.

President. — William B. Stearns, Boston.

Treasurer. — Mason D. Benson, Boston.

Superintendent. — Charles L. Heywood, Boston.

Directors. — William B. Stearns, Seth Bemis, Robert Codman, Rodney Wallace, C. U. Cotting.

ATLANTIC AND ST. LAWRENCE RAILROAD.

Line of Road. — Portland, Me., to Island Pond, Vt. Length, 149.5 miles, of which 52 miles are in New Hampshire. Branch: Lewiston, Me., to Auburn, Me., 5.5 miles. Total length of line, 155 miles; sidings, 28 miles. Steel rails on whole line. Rail 60 pounds.

This road was chartered in Maine February 10, 1845, and in New Hampshire June 30, 1847, to extend from Portland to the eastern boundary of New Hampshire, thence across Coos County to the Canada line, thence, by the line of the St. Lawrence and Atlantic Railway, constructing from Montreal towards Portland, to the St. Lawrence River at Montreal. The Canada and American sections were completed January 10, 1853, when the American section was finished to Island Pond, Vt. The entire line was leased July 1, 1853, to the Grand Trunk Railway Company for 999 years, at an annual rental of 6 per cent on the funded debt and capital stock. This is substantially a sale of the road, constituting it a section of the Grand Trunk line, extending from Portland to Detroit, 876 miles, with 501 miles branch lines,—an aggregate length of 1,377 miles, the entire track of which is laid with steel rails.

This road is now, like all the rest of this colossal line, in first-class condition in its construction, equipments, and all appointments. Nine years ago the Atlantic and St. Lawrence road was in a most wretched condition, but since

then it has been most completely reconstructed and furnished.

In relation to its condition, the last annual report of the railroad commissioners of Maine, after alluding to its "sorry plight" in 1870, when it was "a fearful reproach to the State and to every town on its line, through each of which its track was strewn with fragments of shattered trains," adds that the change now presented is "truly amazing," and the road may now "be named deservedly as an object of national pride."

FINANCIAL STATEMENT FOR YEAR ENDING DEC. 31, 1878.

Capital stock paid in,	\$5,484,000.00	
Funded debt,	3,000,000.00	
Total cost of road and appurtenances,		\$8,484,000.00
Total expenditures working road,		\$823,365.48
Total dividend and interest paid		
by lessees,	516,349.62	
Aggregate expenditures,	— — — — —	\$1,339,715.10
Total income,		848,569.56
Deficit for year,		\$491,145.54
Sinking fund,		\$267,628.65
Mortgages,	\$38,762.25	
City of Portland bonds,	218,500.00	
County bonds,	9,500.00	
Cash in treasury,	866.40	
		\$267,623.65

OFFICERS.

President. — J. B. Brown, Portland.

Treasurer. — C. E. Barrett, Portland.

General Manager. — Joseph Hickson, Montreal.

Directors. — J. B. Brown, C. E. Barrett, Sir A. T. Galt, S. E. Spring, J. Hickson, H. J. Libby, F. R. Barrett, F. K. Swan, P. H. Brown.

MONADNOCK RAILROAD.

Line of Road.—Winchendon, Mass., to Peterborough, N. H. Length, 15.8 miles, of which 13.762 miles are in New Hampshire; sidings, .6 of a mile.

This road was chartered in New Hampshire, December 13, 1848. The company was authorized to build a road from the State line or from the Cheshire Railroad in Rindge or Fitzwilliam through Rindge and Jaffrey to Peterborough. The charter was extended in 1853, and again in 1866 to 1871. In 1868 an extension of the road from the State line to Winchendon was chartered in Massachusetts. It opened to Jaffrey in 1870, and finished to Winchendon in June, 1871. The net income of the road for the year ending September 30, 1873, was \$11,726.54. In 1874 it was leased to the Boston, Barre, and Gardner Railroad Company for the term of 99 years from October 1, 1874, at an annual rental of \$12,000 the first two years, \$15,000 the next three years, and \$18,000 the remainder of the term. The lessees keep no separate accounts for the leased road, and no statement can therefore be presented in regard to its earnings.

The old Concord and Claremont and the Monadnock roads were both chartered in 1848, and it was one of the elements in the scheme of the Monadnock road to extend the line ultimately from Peterborough to connect with the Concord and Claremont road at or near Hillsborough, — an aim which was realized in the opening of the Peterborough and Hillsborough road in July, 1878, and which completed a through line from Worcester, by the way of Peterborough, to Concord. It will be seen in the following statement that the Monadnock corporation hold \$20,000 of the capital stock of the Peterborough and Hillsborough Railroad Company, for which the company subscribed under authority of an act of the legislature July 25, 1878.

FINANCIAL STATEMENT FOR YEAR ENDING SEPT. 30, 1878.

Capital stock, receipts from 2,057 shares,	\$197,926.73
Funded debt, mortgage bonds,	71,500.00
Unfunded debt,	16,000.00
Total cost of road, furnished by lessees,	338,933.50
Total surplus fund, derived mostly from gra- tuities,	80,079.32

TREASURER'S BALANCE-SHEET, SEPTEMBER 30, 1878.

Dr.			Cr.
Cost of road, including interest paid during construction,	\$365,771.47	Capital stock (receipts on 2,057 shares),	\$197,926.73
Fifty-four shares Monadnock Railroad Stock,	3,090.00	Bonds outstanding,	71,500.00
Subscription to stock in Peterborough and Hillsborough Railroad,	20,000.00	Notes outstanding,	16,000.00
Cash on hand,	964.94	Dividends unpaid,	90.00
Due for rents,	5,010.41	Interest unpaid,	1,937.50
		Credit balance,	3,072.91
		Profit (mostly gratuities) and loss,	104,309.68
	<u>\$394,836.82</u>		<u>\$394,836.82</u>

Income for the year ending Sept. 30, 1878,	\$11,376.53
Interest paid during the same time,	\$4,969.08
Expense paid during the same time,	347.91
Dividend declared,	4,108.00
	<u>9,424.99</u>

Surplus for the year,	\$1,951.54
Total corporation debt, bonds, and notes, Sep- tember 30, 1877,	\$96,000.00
Total corporation debt, bonds, and notes, Sep- tember 30, 1878,	<u>87,500.00</u>

Showing a reduction of debt, within the year, of	\$8,500.00
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Receipts.

Cash on hand as per last report,	\$4,873.47
Dividend on Monadnock Railroad stock,	108.00
E. O. Stone, settlement of old accounts,	123.93

Balance of gratuity from town of	
Peterborough,	22,500.00
Rents,	11,376.53
	\$38,981.93

Expenditures.

Interest paid,	\$4,969.08
Dividends paid,	4,070.00
Expenses paid,	347.91
Bill of Scott and Clarke,	130.00
Peterborough and Hillsborough	
Railroad, subscription for stock,	20,000.00
Notes paid,	8,500.00
Cash on hand as per balance-sheet,	964.94
	\$38,981.93

OFFICERS.

President. — H. K. French, Peterborough.

Treasurer. — William G. Livingston, Peterborough.

Directors. — J. H. Fairbank, Peter Upton, O. H. Bradley, H. K. French, Willis Phelps, J. A. Rumrill, W. G. Livingston.

PETERBOROUGH RAILROAD.

Line of Road. — Wilton to Greenfield. Length, 11 miles. Sidings and other tracks, 1 mile.

This road was chartered in 1872. Work of construction began the same year, and was finished to Greenfield in 1874. When completed to Peterborough, its length will be 16 miles. This road was built under a contract made with the Nashua and Lowell Railroad Company in 1872, under which contract the Peterborough Railroad Company was bound to complete its road to Greenfield on or before April 1, 1873; and the Nashua and Lowell Company was to hold it under lease for twenty years from 1873, paying 3 per cent

semi-annually on its nominal cost, together with the taxes, as the yearly rent. These are the terms under which the road is now operated, the Boston and Lowell Railroad Company sharing with the Nashua and Lowell in the lease.

The construction of a line of railroad from Nashua to the Connecticut River, by way of Wilton, Greenfield, and Peterborough, was contemplated as early as 1838, when the Nashua and Lowell road was completed. Surveys of the route were made at that period, and the construction of the line was begun in the building of the Wilton road, which was chartered in 1844, opened to Danforth's Corner, 8 miles, in 1848, to Milford, 4 miles further, in 1850, and finished to Wilton, 4 miles further, in 1851. The physical obstacles to overcome in getting beyond Wilton were so formidable, that no attempt was made to push the work further for nearly twenty years. The first six miles of the valley, the sides of which are rugged, in many places rocky and precipitous, through which the road runs out of Wilton, ascend nearly 500 feet. In 1869 the Nashua and Lowell, and Wilton roads, stimulated by the efforts of rival interests to divert their business, revived the scheme of completing the line, and in 1872 the charter of the Peterborough road was obtained; and under the encouragements of the lease to the Nashua and Lowell road, dated May, 1872, the construction of the road was begun at once, and opened January 1, 1874.

The road was built with funds obtained about two-thirds from subscriptions to stock and the rest from loans, and such is the condition of the investment at the present time. During the first three and one-half years the road was in operation, the company made its annual dividend of 6 per cent regularly, and met the interest on its debt from the rental income, but nothing was left for a sinking fund, while large interest on a portion of the debt was adding to the embarrassments. Under these circumstances the dividend of last October was passed, the rental being applied to the

payment of the most pressing debts. The board of directors have also obtained authority of the legislature to issue bonds to establish a sinking fund, and have, by virtue of this authority, entered into an agreement with the New England Trust Company, by which said Trust Company undertakes to act as trustee and custodian of said sinking fund, and to pay out of the rentals placed with them for the purpose, and out of the accumulations thereon, the coupons and bonds as they fall due.

This plan of disposing of the debt, which seems a wise one, contemplates the appropriation, annually, of the October rentals wholly to the interest and sinking-fund accounts, and of so much of the April rentals as will remain in hand after paying the half-yearly dividend. This amounts in substance to a reduction of dividends to 3 per cent per annum, until such time as the debts are wholly paid. It is estimated, that, with ordinary interest accumulations, the sinking fund to be thus created will pay off the debt considerably within the life of the lease, and that for several of the last years of the term the whole of the rental will be applicable to dividends; ensuring for such period about 9 per cent per annum upon the stock of the company, which will be then free from debt, thus making up in a degree for the diminished dividends of the present.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Capital stock,	\$600,000.00	
Capital stock paid in,		\$385,000.00
Funded debt,	\$100,500.00	
Floating debt,	77,400.00	
Income and dividends unpaid,	39,969.75	
		217,869.75
		\$602,869.75
Total cost of road and equipment,	\$570,250.00	
Assets held by corporation in ad-		
dition to cost of road,	32,619.75	
		\$602,869.75

Income and Disbursements for the Year.

Rental under lease to N. and L. R.

R. Co.,	\$17,136.00	
Interest received,	1,536.70	
Total income,	—————	\$18,672.70
Interest on debt,	\$8,822.04	
Balance charged to sundry acc'ts,	9,850.66	
	—————	\$18,672.70

TREASURER'S TRIAL-BALANCE, MARCH 31, 1879.

Dr.			Cr.
Miscellaneous account,	\$1,133.54	Capital stock,	\$385,000.00
Real estate,	5,433.34	Income account,	39,858.75
Notes receivable,	200.00	Notes payable,	77,400.00
Gratation and masonry,	320,625.76	Dividend No. 11,	81.00
Wooden bridges,	47,468.37	Unclaimed dividend,	30.00
Superstructure,	122,080.94	Bonds of 1877,	100,500.00
Station buildings and fixtures,	18,398.72		
Land and land damage,	25,304.59		
Fences,	5,432.98		
Engineering,	17,774.00		
Agencies,	2,990.80		
Miscellaneous,	10,183.84		
Trust account,	3,474.75		
Cash,	2,230.15		
City savings bank,	225.20		
Interest,	19,922.77		
	\$602,869.75		\$602,869.75

OFFICERS.

President. — James Scott, Nashua.*Treasurer.* — J. G. Kimball, Nashua.

Directors. — James Scott, George W. Gill, G. A. Ramsdell, S. A. B. Abbott, John H. George, Edward Spalding, George Stark.

PORTLAND AND OGDENSBURG RAILROAD.

Line of Road. — Portland to Swanton, Vt. Distance, 234 miles, of which 63 miles are in New Hampshire, about 51 miles in Maine, and 120 miles in Vermont.

This line of road is known in its operations under the names of the "Portland Division," extending from Portland through New Hampshire to the Connecticut River at

Lunenburg, Vt., 114 miles ; and the " Vermont Division," extending from Lunenburg to Swanton at the northern extremity of Lake Champlain, 120 miles.

The Portland Division was chartered in Maine, February 11, 1867, and in New Hampshire in 1869. Construction was begun at Portland in 1870, and the road was opened to Lake Sebago, 16.75 miles, Sept. 19, 1870 ; to Fryburg, 49 miles from Portland ; to Fabyan's August 7, 1875 ; a total distance of 91 miles. From Fabyan's to Scott's Mills, 20 miles, the company uses the Boston, Concord, and Montreal Railroad, and thence to Lunenburg, 3 miles, then over road finished that distance, December 22, 1875. The completion of the line through New Hampshire was arrested in 1875, in consequence of an unfortunate vagueness in provisions of the New Hampshire charter, a controversy arising as to its meaning. The Portland and Ogdensburg Railroad Company, in their last annual report, remark on this matter as follows : —

" The question which for so many years has caused such annoyance and expense to this corporation, owing to the interpretation put upon the language of the act granting a right of way to the Portland and Ogdensburg Railroad Company, through the State of New Hampshire, by parties outside of the company, some of whom were in hopes thereby to prevent the construction of the road, and others to compel the company to build upon a route different from that selected by the directors, has been solved by the passage of an act at the last session of the New Hampshire legislature, amendatory of the act aforesaid and authorizing, in explicit and unequivocal terms, the location and construction of the road upon the route selected by the directors ; and the time for the construction and completion of the same extended to the first of January, 1890. In accordance therewith a location has been made from the Fabyan House through Carroll, Whitefield and Dalton, to a junction with that section of the road already constructed between Scott's Mills

and the Vermont line, and a copy of said location filed in the office of the secretary of state of New Hampshire."

The legislature of New Hampshire, by act passed June 26, 1877, expressly confirmed to the Portland and Ogdensburg Railroad Company, the piece of road from the eastern line of the State to Fabyan's, and the piece from Scott's Mills in Dalton to the Vermont line. And an act passed July 25, 1878, authorized the corporation to prolong its road from the east to the west line of the State through Conway, Bartlett, Hart's Location, Crawford's Grant, Carroll, Whitefield, and Dalton, the time for its completion being extended to January 1, 1890.

The "Vermont Division" consists of three separately chartered roads,—the Lamoille Valley, the Montpelier and St. Johnsbury, and the Essex County Railroads,—in the construction of which the three corporations united, commencing the work in 1871, and completing the line to Swanton in 1877. The line thus comprising three distinct corporations, is operated by an executive committee selected from the three organizations, and who are, in fact, the directors of the line as if it were a single company. The aggregate paid-in capital stock of the three roads, Dec. 31, 1876, was \$1,200,000; the funded debt, \$2,300,000; cost of combined roads, \$3,800,000; equipments, \$100,000. The funded debt consisted of first-mortgage six per cent gold bonds, due in 1891, secured on the three roads. There were also issued preferred six per cent bonds amounting to \$500,000, due in 1896. The whole line went into the hands of receivers, by whom it has since been operated, and who propose a re-organization of the concern.

In relation to the Portland Division, which is the portion specially identified with New Hampshire, the last annual report of the railroad commissioners of Maine speaks in the highest terms of the wisdom and energy of its management, and of the future of the road adds: "The location of the road, through a portion of the country almost unsur-

passed for the beauty and grandeur of its magnificent and ever-attractive scenery, makes it one of the most desirable, and, in fact, indispensable routes of travel for tourists and pleasure-seekers in all New England, or, perhaps it might be said with truth, in the whole United States ; and we are not wanting in faith, that, sometime in the near future, the anticipations of the friends and projectors of the road may be realized, and the Portland and Ogdensburg become one of the great outlets for the traffic of portions of New Hampshire and Vermont, and the still more important business and productions of the great West."

The fact that this road shows an increase of more than four per cent in gross earnings, the past year over the previous year, is a just ground of encouragement in these times when almost all roads show heavy percentage the other way.

FINANCIAL STATEMENT, YEAR ENDING SEPTEMBER 30, 1878.

Gross earnings,	\$270,783.07
Operating expenses,	\$194,209.12
Coupons on 1st M. scrip,	18,720.00
Interest,	2,304.54
New locomotive,	8,000.00
New cars,	4,478.20
	\$227,711.86
Surplus,	\$43,071.21
Applied to payment of coupons falling due October 1, 1878, and January 1, 1879.	
Gross earnings for 12 months ending September 30, 1878,	\$270,783.07
Gross earnings for 12 months ending September 30, 1877,	259,885.98
Increase for 1878,	\$10,897.09

BALANCE-SHEET, SEPTEMBER 30, 1878.

Dr.		Cr.
Cost of road, including discount on bonds and interest during construction,	\$3,564,544.34	Capital stock, \$1,052,185.55
Cost of equipment,	292,838.15	Bonds, issue of Nov. 1, 1870,
Supplies and material on hand,	13,024.75	sold, 795,000.00
Cash,	13,667.94	Bonds, issue of Nov. 1, 1871,
Bills receivable,	32,448.36	sold, 497,500.00
Traffic balance,	25,636.57	Bonds, issue of Nov. 1, 1871,
Due from agents and others,	22,164.70	exchanged with City of
Anticipated payment of coupons on 1st M. bonds,	16,670.20	Portland, 1,350,000.00
		Bills payable, 201,503.46
		Accounts payable, 16,481.10
		Traffic balances and pay-roll, 13,749.94
		Profit and loss, 54,214.98
Total,	\$3,980,995.01	Total,
		\$3,980,995.01

OFFICERS.

President. — Samuel J. Anderson, Portland.

Treasurer. — John W. Dana, Portland.

Superintendent. — Jonas Hamilton, Portland.

Directors. — H. N. Jose, Portland; W. F. Milliken, Portland; J. S. Ricker, Portland; J. Eastman, Conway; J. P. Baxter, Portland; R. M. Richardson, Portland; W. W. Thomas, Jr., Portland; Samuel Waterhouse, Portland; Francis Fessenden, Portland.

PORTLAND AND ROCHESTER RAILROAD.

Line of Road. — Portland to Rochester. Length, 52.5 miles, of which 3 miles are in New Hampshire. Sidings, 7 miles.

This road was originally chartered in Maine, July 30, 1846, under the title of the York and Cumberland Railroad, and opened to the Saco River in Buxton, 18 miles, in 1853, no attempt to extend it further being made for a dozen years. The charter authorized the construction of a road from Portland through Gorham, Buxton, and Alfred to some road in South Berwick or Berwick leading to Boston. Subsequently the plan of a line, not to Boston, but direct through to the West, was devised, and in 1865

the charter of the old road was changed in Maine to meet that plan, the corporation taking the name of the Portland and Rochester Railroad Company, which was, by a legislative act July 2, 1866, constituted a corporation in this State. Extension commenced about this time, and the line was opened to Rochester in July, 1871. The route by this line and the Nashua and Rochester road, opened in 1874, is certainly very direct, and it is not unreasonable to suppose that at some time in the not far-distant future these roads will attract much more remunerative business than they have yet realized.

The net earnings being insufficient to meet the interest on the funded debt, the city of Portland entered into an arrangement with the company, under which, from 1874 to 1877, the company was to run the road, keeping it in good order, and pay over the net earnings to the city, whose bonds constitute \$1,150,000 of the funded debt, — the company's seven per cent bonds, \$350,000, being the balance of the debt. This arrangement failing to extricate the company in any degree from its overwhelming embarrassments, the road, February 1, 1877, went into the hands of a receiver. In consequence of the new law in Maine to provide for uniformity in the railroad year, harmonizing with that of Massachusetts, the accounts of all the Maine roads comprised thirteen months in their last returns, September 30, 1878. The following information is derived from the report of J. P. Wescott, receiver, September 30, 1878.

FINANCIAL STATEMENT.

Capital stock,	\$636,011.06
City of Portland bonds A,	700,000.00
Portland and Rochester seven per cent bonds,	350,000.00
City of Portland bonds B,	450,000.00
Bills payable, including notes given by receiver,	59,455.12

Aggregate capital stock and debt, not including over-due coupons, since Feb. 1, 1871, \$2,195,466.18

Total earnings for the year,	\$148,159.89
Total operating expenses,	118,816.70
Net earnings thirteen months,	<u>\$29,342.69</u>

CONDITION OF SINKING FUND.

A fund was established June 1, 1867, for the re-imbursement of the city loan of \$700,000.

Principal,	\$39,500.00
Interest,	23,384.80
	<u>\$62,884.80</u>

The investment as compared with last year is as follows :

	1877.	1878.
City bonds of railroad loan,	\$62,500.00	\$66,000.00
Cash,	24.68	78.06
	<u>\$62,524.68</u>	<u>\$66,078.06</u>
Credit balance of premium account,	3,345.13	3,193.26
	<u>\$59,179.55</u>	<u>\$62,884.80</u>

A fund was established February 27, 1872, for the re-imbursement of the city loan of \$450,000.

Principal,	\$9,000.00
Interest,	3,583.16
	<u>\$12,583.16</u>

The investment as compared with last year is as follows :

	1877.	1878.
City bonds of railroad loan,	\$12,500.00	\$13,500.00
Cash on hand,	68.50	223.72
	<u>\$12,568.50</u>	<u>\$13,726.28</u>
Credit balance of premium account,	732.50	693.12
	<u>\$11,836.00</u>	<u>\$12,583.16</u>

OFFICERS.

President. — George P. Wescott.

Vice-President. — Frederick Robie.

Treasurer. — William H. Conant.

Directors. — Frederick Robie, Gorham; John Lynch, Portland; H. J. Libby, Portland; W. G. Ray, New York City; J. S. Ricker, Deering; George P. Wescott, Portland; A. K. Shurtleff, Portland; Charles McCarthy, Portland; William R. Wood, Portland; John A. Waterman, Gorham; E. G. Wallace, Rochester.

MANCHESTER AND KEENE RAILROAD.

Line of Road. — Parker's Station in Goffstown, on Manchester and North Weare Railroad, to Keene. Length, 46 miles.

This road was chartered June 22, 1864, but the work of construction was not commenced till May 16, 1876, when it was confidently anticipated that the section connecting Keene with the Peterborough road at Peterborough, a distance of 29.55 miles, would be rapidly pushed to completion. But after five months of inefficient work the contractors failed, abandoned their undertaking, and involved the company in litigation and disaster which seemed for a time to foreshadow entire ruin to the enterprise. But under the sanctions of an act of the legislature for that purpose, the towns from Keene to Greenfield, in which the road has its junction with the Peterborough road, appropriated gratuities to the company aggregating \$180,735.56, and with this large encouragement, the company, which had meanwhile adjusted the troubles of the previous year, started in the fall of 1877 again into the work of construction. The amount appropriated by each town is shown in the treasurer's balance-sheet for March 31, 1877, which is embraced in the subjoined financial statement.

The board of railroad commissioners in their annual report two years ago, in allusion to this road, said: "The work is now in progress again under prudent management of the officers of the corporation; and it is expected that thirty miles of the road, from the terminus of the Peterborough Railroad in Greenfield to the city of Keene, will be completed and ready for operation in one year from May 1, 1877.

"The outlays to the present time, including land damages and engineering, approximate \$136,000."

Again, in their annual report one year ago, they spoke of what had been done on the road and of the future work as follows: "In the fall of 1877, the grading was completed and the rails laid from the terminus of the Peterborough Railroad, in Greenfield, to Hancock, a distance of about 7 miles. Recently, a new contract has been made with responsible and competent men, who guarantee to complete the road by December 1, 1878. Work has recommenced the whole length of the line, the land damages have been adjusted and paid, and the enterprise pushed forward with an energy that insures the completion of the road the coming fall."

The road between Greenfield and Hancock Center (9 miles) was completed more than a year ago, and is in excellent condition.

The only town that has paid any part of its voted gratuity is Harrisville, which has paid \$11,000 out of the \$17,449.05 voted.

The following amounts are due from the several towns through which the road has been constructed and is now nearly finished: Keene, \$128,951.58; Marlboro, \$8,795.68; Harrisville, balance, \$6,449.05; Hancock, \$16,460.90; Bennington, \$9,078.35.

The president of the road, in relation to this matter, says: "When these gratuities are paid the corporation will be relieved from financial embarrassments, and will take its

place as one of the important roads of New Hampshire."

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Capital stock authorized,	\$1,600,000.00
Capital stock paid in,	465,144.70
Funded debt issued,	369,400.00
Floating debt,	103,473.51
Amount of debt secured by mortgage of road and franchise, interest about 7 per cent, during year,	500,000.00

Cost of Road and Equipment.

Construction accounts unadjusted,	\$42,232.07	
Graduation and masonry,	667,336.86	
Wooden bridges,	93,322.96	
Superstructure, including iron,	106,571.52	
Station buildings and fixtures,	783.00	
Land, land damages, fences,	4,295.00	
Miscellaneous,	23,476.80	
Total,		\$938,018.21
Assets held by corporation in addition to cost of road,		311,335.56
Total operating expenses Aug. 14, 1878, to March 31, 1879,		\$3,813.13
Earnings from passengers,	\$1,604.65	
Earnings from freight,	1,802.96	
Total earnings,		3,537.61
Loss,		\$275.52

The road was opened for traffic from Keene to Peterborough August 14, 1878, and one mixed train has been run daily since that date. The company have purchased no furniture.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1877.

Receipts.

Capital stock (including all payments on account),	\$119,498.93	
First-mortgage gold bonds issued,	60,000.00	
Notes payable,	25,652.15	
Gratuities paid on account,	500.00	
		<u>\$205,651.08</u>

Approximate Expenditures.

Grading and masonry,	\$141,504.03	
Bridging and trestles,	10,500.00	
Land and land damages,	4,000.00	
Superstructure,	39,000.00	
Engineering,	5,000.00	
Interest account,	1,648.55	
Miscellaneous,	4,003.50	
		<u>\$205,651.08</u>

BALANCE-SHEET, MARCH 31, 1878.

Dr.			Cr.
Construction account,	\$204,007.53	Capital stock account,	\$119,498.93
Interest account,	1,643.55	First-mortgage gold bonds,	60,000.00
City of Keene,	128,951.58	Notes payable,	25,652.15
Town of Marlborough,	8,795.68	Gratuities,	180,735.56
Town of Harrisville,	16,949.05		
Town of Hancock,	16,460.90		
Town of Bennington,	9,078.35		
	<u>\$385,886.64</u>		<u>\$385,886.64</u>

BALANCE-SHEET, APRIL 17, 1879.

Dr.			Cr.
Graduation and masonry,	\$717,336.86	Capital stock,	\$465,144.70
Superstructure,	36,365.61	Gold bonds,	560,000.00
Wooden bridges,	43,322.96	Notes payable,	86,967.60
Stations, buildings, and fixtures,	783.00	Gratuities,	180,735.56
Land and land damages,	1,295.00	Bills payable,	16,563.91
Fences,	3,000.00		
Engineering,	7,908.26		
Agencies and miscellaneous ex-			
penses,	15,568.54		
Suspense account,	17,289.76		
City of Keene,	128,951.58		
Town of Marlborough,	8,795.68		
Town of Harrisville,	16,949.05		
Town of Hancock,	16,460.90		
Town of Bennington,	9,078.35		
Bills receivable,	21,783.30		
Northern Railroad,	20,122.92		
Lane, White, and Dearborn,			
trustees,	130,600.00		
Bonds, pledged as collateral,	113,800.00		
	<u>\$1,309,411.77</u>		<u>\$1,309,411.77</u>

OFFICERS.

President. — T. H. Wood.

Treasurer. — J. H. Buttrick, Lowell, Mass.

Directors. — Henry Colony, Keene ; S. W. Hale, Keene ; S. G. Griffin, Keene ; George B. Twitchell, Keene ; John H. Buttrick, Lowell ; Christopher Robb, Stoddard ; Dana Sargent, Nashua ; E. P. Emerson, Nashua ; David Gregg, Wilton.

MANCHESTER HORSE RAILROAD.

Line of Road. — Piscataquog Village to Amoskeag Village. Length of completed track, 2.37 miles ; double main track, 1 mile. Sidings, $\frac{1}{8}$ mile. Rail, 26 pounds.

This is the only horse railway in the State, and is the first road of the kind chartered in this State. It was originally incorporated July 16, 1864. By an act June 30, 1869, the charter was revived, and continued in force till December 31, 1875, and by an act July 20, 1876, again revived, and the time for the completion of the road extended to December 31, 1881. Four other horse-railroad corporations have been chartered in this State, but in neither case was there ever any organized attempt to build a road. The Center Harbor and Conway Railroad Company, authorized to build a horse railroad from the steamboat landing at Center Harbor to Conway, was chartered June 30, 1865. The Exeter Horse Railroad was chartered July 2, 1870, the Nashua Horse Railroad July 11, 1871, and the Concord Horse Railroad July 18, 1878.

The construction of the Manchester Horse Railroad was begun in the spring of 1877, and finished in the latter part of that year. The charter provides that the "railroad may be operated by such horse or other motive power as may be authorized by the mayor and aldermen," and is, therefore, something more than a horse-railroad charter, though noth-

ing more than horse power seems to enter into the execution of the plan.

FINANCIAL STATEMENT FOR YEAR ENDING MARCH 31, 1879.

Capital stock,	\$25,000.00
paid in,	25,000.00
Floating debt (no funded debt),	539.00

Expenditures.

Repairs of road exclusive of rails,	\$895.68
Rails and laying same,	166.68
Gates, fences, and houses,	277.73
Taxes,	65.87
Passenger cars,	1,804.51
Wages,	4,662.47
Salaries,	939.00
Oil, gas, water, fuel,	177.19
All other expenses,	4,357.91

Total expenditures,		\$13,347.04
Income from passengers,	\$12,989.32	
all other sources,	1,208.46	
		14,197.78
Net earnings for the year,		\$850.74

OFFICERS.

President. — S. N. Bell.

Treasurer. — Frederick Smyth

Clerk. — James A. Weston.

Directors. — S. N. Bell, Frederick Smyth, James A. Weston, B. F. Martin. E. A. Straw.

APPENDIX.

APPENDIX A.

Table showing the corporate names of the railroad companies which have been chartered in this State, the dates of the organic acts, and a brief statement of the line of road defined in each charter.

Date of Charter.	Name of Corporation.	Line of Road.
June 23, 1835.	Nashua and Lowell R. R. Corporation.	Southern line of State to Nashua.
June 27, 1835.	Concord Railroad Corporation.....	Nashua village to Concord.
June 27, 1835.	Keene Railroad Company.....	Keene to Fitzwilliam or Rindge.
June 27, 1835.	Boston and Maine Railroad.....	Haverhill, Mass. to Maine State line.
June 18, 1836.	Eastern Railroad in New Hampshire.	Seabrook to Portsmouth.
Dec. 28, 1836.	Concord Granite and Railway Co.....	New Hampshire ledge or quarry to Merrimack River.
July 2, 1839.	Dover and Winnepesaukee Railroad...	Dover to Alton.
July 2, 1839.	Portland and Connecticut River Railroad Corporation.....	Easterly State line in Grafton County to westerly line in Coos County.
Dec. 21, 1842.	Proprietors of the Portsmouth and Dover Railroad.....	Portsmouth to Dover.
June 18, 1844.	Northern Railroad Company.....	Concord or Bow, to Haverhill or Charlestown.
June 19, 1844.	Fitchburg, Keene, and Connecticut River Railroad Company.....	Fitzwilliam or Rindge, to Walpole or Charlestown.
June 19, 1844.	Great Falls and Conway Railroad....	Somersworth to Conway.
Dec. 24, 1844.	Groton and Nashua R. R. Corporation.	Dunstable, Mass., to Nashua village.
Dec. 27, 1844.	Northern Railroad.....	Concord or Bow, to Lebanon.
Dec. 27, 1844.	Colebrook Railroad Company.....	East line of State, Coos Co. to west line.
Dec. 27, 1844.	Boston, Concord, and Montreal R. R.	Connecticut River, near Haverhill or Littleton, to Concord or Bow.
Dec. 27, 1844.	Cheshire Railroad Company.....	Fitzwilliam or Rindge, to Walpole or Charlestown.
Dec. 27, 1844.	Ashuelot Railroad Company.....	Richmond or Winchester, to Hinsdale
Dec. 28, 1844.	Wilton Railroad Company.....	Concord Railroad near Souhegan River, to East Wilton and Peterboro'.
July 1, 1845.	Portsmouth, Newmarket, and Concord Railroad.....	Portsmouth to Concord or Manchester.
July 1, 1845.	Portsmouth, Newmarket, and Exeter Railroad.....	Portsmouth to Dover, Durham, Newmarket, or Exeter.
July 8, 1846.	Souhegan Railroad Company.....	Amherst to Merrimack.
July 8, 1846.	Peterborough and Shirley R. R. Co...	Mason to Peterborough.
July 8, 1846.	Franklin and Bristol Railroad.....	Franklin to Bristol village.
July 10, 1846.	East Wilton and Groton Railroad Co.	East Wilton to State line, Groton, Ms.
July 10, 1846.	Sullivan Railroad Company.....	Windsor or Weathersfield, Vt. to junction with the Cheshire Railroad.
July 10, 1846.	Salisbury and East Kingston R. R. Co.	South Hampton to East Kingston.
June 30, 1847.	Manchester and Lawrence Railroad...	Salem to Lawrence.
June 30, 1847.	Atlantic and St. Lawrence Railroad Company.....	Eastern State line to western, through Coos County.

Date of Charter.	Name of Corporation.	Line of Road.
July 2, 1847.	Coheco Railroad Company.....	Dover to Gilford, Meredith, Center Harbor, or Holderness.
July 2, 1847.	Goffstown and Manchester R. R. Co..	Goffstown to Manchester.
July 2, 1847.	Grafton Railroad.....	Lebanon to Orford.
July 2, 1847.	Conway and Meredith Railroad Co...	Conway to Meredith.
June 20, 1848.	Connecticut River Railroad Company	Walpole or Westmoreland to south line of State.
June 24, 1848.	Concord and Claremont Railroad....	Concord or Bow to Claremont.
June 24, 1848.	Contoocook Valley Railroad.....	Concord to Peterborough.
June 24, 1848.	New Hampshire Central R. R. Co....	Manchester to village of Claremont.
Dec. 13, 1848.	Monadnock Railroad Company.....	Fitzwilliam or Rindge, to Peterboro'.
Dec. 24, 1848.	White Mountains Railroad.....	Haverhill to Lancaster.
Dec. 29, 1848.	Nashua and Epping Railroad Co.....	Nashua or Nashville to Raymond or Epping.
Jan. 3, 1849.	Piscataquog River Railroad.....	Central Railroad in Goffstown or New Boston to Water village in New Boston.
Jan. 3, 1849.	Connecticut River and Montreal R.R.	Haverhill to Lancaster.
Jan. 3, 1849.	Essex Extension Railroad Company..	Salem center village to State line in Salem.
Jan. 4, 1849.	Suncook Valley Railroad.....	Hooksett, Allenstown, or Pembroke, to Pittsfield.
July 6, 1849.	Manchester and Candia Railroad....	Manchester to Candia.
July 6, 1849.	Suncook Valley Extension Railroad..	Pittsfield to Alton.
July 6, 1849.	Salisbury and East Kingston Extension Railroad....	East Kingston to Epping or Raymond.
July 2, 1851.	New Hampshire Union Railroad.....	Hillsborough to Keene.
Jan. 8, 1853.	Merrimack and Connecticut River Railroad.....	Union of Concord and Claremont R. R., and the N. H. Central R. R. Co. This <i>old</i> N. H. Central R. R. is the present North Weare road, and this <i>old</i> Concord and Claremont is the present Concord and Claremont road.
July 14, 1854.	Claremont Railroad Company.....	Claremont village to Sullivan Railroad in Claremont.
July 14, 1855.	Ammonoosuc Valley Railroad Co....	Authorized to buy White Mountains Railroad, which the owners of are authorized to sell.
July 14, 1855.	Sugar River Railroad.....	Henniker to Claremont.
July 14, 1855.	Concord and Portsmouth Railroad...	Successors of Portsmouth and Concord Railroad.
July 12, 1856.	Contoocook River Railroad	Successors of Contoocook Valley Railroad.
June 26, 1858.	Manchester and North Weare R. R. .	Successors to rights, franchises, and corporate property of New Hampshire Central R. R. Co.
July 1, 1862.	Dover and Winnepesaukee Railroad	Successors of Coheco Railroad Company.
July 1, 1863.	Suncook Valley Railroad.....	Pittsfield village to Pembroke or Allenstown.
July 1, 1863.	Suncook Valley Railroad.....	Pittsfield to a point on Concord and Portsmouth Railroad, at or near Suncook in Allenstown or Pembroke.
July 1, 1863.	Suncook Valley Railroad.....	At or near Hooksett.
June 22, 1864.	Manchester and Keene Railroad.....	Manchester or Goffstown to Keene.
July 16, 1864.	Coos Railroad	Littleton to Northumberland.
July 16, 1864.	Manchester Horse Railroad.....	Piscataquog village to Amoskeag village; may use horse or any other power.
June 30, 1865.	Center Harbor and Conway Horse Railroad Company.....	Steamboat landing in Center Harbor to Conway.
June 30, 1865.	Portsmouth, Great Falls, and Conway Railroad.....	Successors of Great Falls and Conway Railroad.
July 7, 1866.	Peterborough Railroad.....	Peterborough center village to Wilton or Mason.
July 7, 1866.	Sugar River Railroad	Successors of Concord and Claremont and of Merrimack and Connecticut River Railroad, so far as related to railroad from Concord to Bradford.

Date of Charter.	Name of Corporation.	Line of Road.
July 7, 1866.	Portsmouth and Dover Railroad.....	Portsmouth to Dover.
July 8, 1867.	Nashua and Rochester Railroad.....	Union of Nashua and Epping Railroad Company, with Portland and Rochester Railroad Company.
July 6, 1867.	Portland, White Mountains and Ogdensburg Railroad.....	East line of State in Carroll County to west line in Monroe, Littleton, Dalton, or Lancaster.
June 24, 1868.	Piscataquog River Railroad.....	Manchester and North Weare, old Piscataquog River R. R. (Jan. 3, 1849), revived and extended.
July 1, 1868.	The Wolfeborough Railroad.....	Wakefield to Wolfeborough.
June 30, 1868.	The West Amesbury Branch R. R....	Newton to Boston and Maine Railroad in New Hampshire or to Haverhill, Mass.
July 1, 1868.	The Exeter Railway.....	Epping to Hampton, South Hampton or Hampton Falls.
July 3, 1868.	The Franklin and Portland Railroad.	New Durham to Franklin.
July 3, 1868.	The New Hampshire Central R. R....	Freedom or Effingham to Danbury.
July 3, 1868.	The Mont Vernon R. R. Corporation.	Amherst to Mont Vernon, New Boston or Franconstown.
July 7, 1869.	Branch Railroad.....	Lower terminus of Mount Washington R. R. to White Mountains R. R.
July 6, 1869.	Concord and Rochester Railroad.....	East Concord to Rochester.
July 7, 1869.	The Peterboro' and Hillsboro' R. R....	Peterboro' to Hillsboro' Bridge.
July 7, 1860.	Portland and Ogdensburg R. R. Co...	Conway through the Notch to St. Johnsbury or Dalton.
June 27, 1870.	Blackwater River Railroad.....	Concord to Andover.
June 29, 1870.	Windsor and Forest Line Railroad...	Cornish to Greenfield.
July 2, 1870.	Exeter Horse Railroad.....	
July 5, 1871.	Manchester and Ashburnham R. R....	Manchester to State line near Windchendon.
July 5, 1871.	Littleton and Franconia R. R. Co....	Littleton to Franconia.
July 5, 1871.	Meredith and Conway Railroad.....	Revival of Conway and Meredith R. R. Company, chartered July 21, '47.
July 5, 1871.	Nashua Horse Railroad.....	
June 26, 1872.	Rye Beach Railroad.....	Rye Beach to Portsmouth.
June 27, 1872.	Nashua, Acton, and Boston R.R. Co..	State line to Nashua.
July 3, 1872.	Claremont and White River Junction Railroad.....	Claremont to Lebanon.
July 4, 1872.	Iron Mountain Railroad.....	Bartlett to Conway.
July 3, 1873.	Portsmouth and Marginal Railroad..	Railroad tracks in Portsmouth to Piscataqua River in Portsmouth or Newcastle.
July 7, 1874.	Nashua and Plaistow Railroad.....	Plaistow or Atkinson to Nashua.
July 7, 1874.	Spicket River Railroad.....	Salem to Derry.
July 7, 1874.	Lowell and Windham Railroad.....	Any point between Pelham and Draught to Windham.
July 9, 1874.	Pemigewasset Valley Railroad.....	Plymouth to source of Mad River (permission to use narrow-gauge).
July 9, 1874.	Swift River Railroad.....	Conway up valley of Swift River to its source.
July 2, 1875.	Sawyer River Railroad.....	Hart's Location to head waters of Sawyer River.
June 26, 1877.	Farmington and Rochester Railroad.	Farmington to Rochester.
July 14, 1877.	Manchester and Fitchburg Railroad..	Manchester to Brookline, Mason, New Ipswich or Rindge.
June 26, 1878.	Concord Horse Railroad.....	Main street to Fisherville.
July 11, 1878.	Profile and Franconia Notch R. R....	Bethlehem to Profile House.
July 11, 1878.	Whitefield and Jefferson Railroad...	Dalton or Whitefield to Randolph, and branch to Kilkenny and Berlin.
July 18, 1878.	New Zealand River Railroad.....	Town of Carroll to head waters of New Zealand River.

APPENDIX B.

Table showing the mileage, gross and net earnings, freight and passenger earnings, and dividends of the railroads of the United States for five years, 1873-1877, arranged by geographical divisions.

	1877.	1876.	1875.	1874.	1873.
NEW ENGLAND.					
Miles of railroad.....	6,039	5,783	5,732	5,617	5,303
Earnings from passengers.....	\$20,065,709	\$20,516,215	\$21,776,893	\$22,111,787	\$22,358,645
" " freight, etc.	24,524,756	25,244,778	26,552,029	27,962,967	29,310,043
" " all sources.	44,590,465	45,760,993	48,328,922	50,064,774	51,678,688
Net earnings.....	13,735,746	15,379,072	15,324,654	16,713,183	15,061,777
Dividends.....	6,977,726	7,607,973	8,788,040	8,511,971	9,004,488
MIDDLE STATES.					
Miles of railroad.....	13,607	13,647	13,173	12,874	12,441
Earnings from passengers.....	\$39,255,780	\$47,483,865	\$40,772,967	\$41,699,871	\$42,355,230
" " freight, etc.	116,687,341	130,129,542	134,904,451	144,798,567	151,687,072
" " all sources.	155,943,121	177,613,407	175,677,418	186,498,438	194,062,302
Net earnings.....	61,033,089	69,382,517	65,609,418	80,188,972	69,280,585
Dividends.....	24,890,480	33,690,111	39,357,196	37,600,154	36,531,343
SOUTHERN STATES.					
Miles of railroad.....	11,272	13,948	13,522	13,505	13,908
Earnings from passengers.....	\$9,953,090	\$11,877,901	\$13,864,915	\$14,131,291	\$15,310,989
" " freight, etc.	29,859,268	38,865,747	36,534,312	38,127,960	38,385,420
" " all sources.	39,812,358	50,743,648	50,399,227	52,259,241	53,696,409
Net earnings.....	12,664,346	17,119,031	16,741,060	17,269,332	18,133,349
Dividends.....	2,740,793	1,860,351	1,496,906	1,068,455	901,396
WESTERN AND SOUTH-WESTERN STATES.					
Miles of railroad.....	39,136	36,753	36,058	35,639	32,973
Earnings from passengers.....	\$44,437,039	\$43,362,211	\$54,993,084	\$56,783,466	\$51,620,779
" " freight, etc.	148,767,477	142,890,621	151,224,570	158,086,011	160,097,002
" " all sources.	193,204,516	186,242,832	206,217,654	214,869,477	211,717,781
Net earnings.....	66,085,243	63,912,968	75,604,104	75,546,695	72,464,212
Dividends.....	14,556,462	17,394,532	19,230,511	16,605,832	19,055,247
PACIFIC STATES.					
Miles of railroad.....	1,896	1,126	1,023	417	390
Earnings from passengers.....	\$2,330,079	\$1,797,911	\$1,943,207	\$1,223,248	\$1,175,193
" " freight, etc.	5,466,845	4,136,406	3,737,239	1,316,124	1,237,603
" " all sources.	7,766,922	5,964,318	5,580,446	2,539,372	2,412,796
Net earnings.....	2,655,137	2,331,325	2,687,069	1,395,790	1,263,097
Dividends.....	240,099	187,701	.....	.....	.....
PACIFIC RAILROADS.					
Miles of railroad.....	2,251	2,251	2,251	2,251	2,251
Earnings from passengers.....	\$9,163,627	\$10,216,424	\$10,243,956	\$9,002,276	\$8,641,013
" " freight, etc.	23,006,455	20,317,379	18,770,892	15,792,318	15,568,931
" " all sources.	32,170,082	31,033,803	29,014,848	24,794,594	24,209,944
Net earnings.....	15,063,582	17,033,517	16,614,855	14,374,742	13,648,195
Dividends.....	7,281,640	7,299,000	7,632,250	8,256,530	1,628,265

The summary of earnings, expenses, etc., given in the foregoing table, shows that the decrease of business

has extended over all parts of the country, and to what extent. The reduction in the rates of transportation, noted in 1876, has continued through 1877, as an examination of the statements of all the leading railroads throughout the country will show.

Statement showing the number of miles of railroad constructed each year in the United States, from 1830 to the close of 1877 inclusive.

Year.	Miles in Operation.	Annual Increase of Mileage.	Year.	Miles in Operation.	Annual Increase of Mileage.	Year.	Miles in Operation.	Annual Increase of Mileage.
1830	22	....	1846	4,930	297	1862	32,120	834
1831	95	72	1847	5,598	668	1863	33,170	1,050
1832	229	134	1848	5,996	398	1864	33,908	738
1833	380	151	1849	7,365	1,369	1865	35,085	1,177
1834	633	253	1850	9,021	1,656	1866	36,801	1,716
1835	1,098	465	1851	10,982	1,961	1867	39,250	2,449
1836	1,273	175	1852	12,908	1,926	1868	42,229	2,979
1837	1,497	224	1853	15,360	2,452	1869	46,844	4,615
1838	1,913	416	1854	16,720	1,360	1870	52,914	6,070
1839	2,302	389	1855	18,374	1,654	1871	60,522	7,608
1840	2,818	516	1856	22,016	3,647	1872	66,242	5,720
1841	3,535	717	1857	24,503	2,487	1873	70,311	4,069
1842	4,026	491	1858	26,968	2,465	1874	72,616	2,305
1843	4,185	159	1859	28,789	1,821	1875	74,374	1,758
1844	4,377	192	1860	30,635	1,846	1876	77,031	2,657
1845	4,633	256	1861	31,286	651	1877	79,208	2,177

Statement of miles of railroads in each New England State, and in the United States, December 31, 1877-1867.

	1877.	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.	1867.
Maine.....	997	997	980	957	905	871	871	786	580	560	521
New Hampshire....	964	940	934	918	877	810	790	736	702	667	667
Vermont.....	872	810	810	778	721	710	675	614	614	605	587
Massachusetts.....	1,863	1,837	1,817	1,786	1,755	1,658	1,606	1,480	1,480	1,425	1,401
Rhode Island.....	204	189	179	173	159	136	136	136	125	125	125
Connecticut.....	922	918	918	897	897	868	820	742	692	637	637
New England.....	5,822	5,681	5,638	5,509	5,314	5,053	4,898	4,494	4,293	4,019	3,938
United States.....	79,208	77,031	74,374	72,616	70,311	66,242	60,522	52,914	46,844	42,229	39,250

APPENDIX C.

Mileage of railroads completed and in operation within the limits of the State of New Hampshire.

No.	MILES.
1. Ashuelot Railroad — Keene to Ashuelot.....	23.00
2. Atlantic and St. Lawrence Railroad (Grand Trunk Railway Company, Lessee) — Shelburne, Vt., to North Stratford.....	52.00
3. Boston, Concord, and Montreal Railroad — Concord to Wells River.....	93.26
White Mountains Railroad — Wells River to Littleton.....	20.92
The White Mountains Extension — Littleton to Groveton Junction.....	31.99
Wing Road — Groveton Junction to base of mountain.....	20.39
	166.56
4. Boston and Maine Railroad — State line, Mass., to State line, Me.	34.75
5. Cheshire Railroad — State line, Mass., to State line, Vt.	42.81
6. Concord Railroad — Concord to Nashua.....	35.00
7. Concord and Claremont Railroad — Concord to Claremont.....	56.00
Branch — Contoocook to Hillsborough Bridge.....	15.00
	71.00
8. Concord and Portsmouth Railroad — Portsmouth to Rochester.....	40.50
9. Dover and Winnepesaukee Railroad — Dover to Alton Bay.....	29.00
10. Eastern Railroad — Seabrook to Portsmouth.....	16.55
11. Fitchburg Railroad — State line, Mass., to Greenville.....	9.37
12. Manchester and Lawrence Railroad — Manchester to State line.....	22.39
13. Manchester and North Weare Railroad — Manchester to North Weare.....	19.00
14. Monadnock Railroad — State line, Mass., to Peterborough.....	13.76
15. Mt. Washington Railway — base of mountain to summit.....	3.00
16. Nashua, Acton, and Boston Railroad — Nashua to State line.....	4.75
17. Nashua and Lowell Railroad — Nashua to State line, Mass.....	5.25
18. Nashua and Rochester Railroad — Nashua to Rochester.....	48.81
19. Northern Railroad — Concord to West Lebanon.....	69.59
Branch — Franklin to Bristol.....	13.41
	82.91
20. Peterborough Railroad — Wilton to Greenfield.....	10.50
21. Portland and Ogdensburg Railroad — State line, Me., to State line, Vt.....	42.00
22. Portland and Rochester Railroad — State line, Me., to Rochester.....	3.00
23. Portsmouth, Great Falls, and Conway Railroad — Portsmouth to Conway.....	71.37
24. Portsmouth and Dover Railroad — Portsmouth to Dover.....	10.88
25. Sullivan County Railroad — Windsor, Vt., to Bellows Falls, Vt.....	25.50
26. Suncook Valley Railroad — Suncook to Pittsfield.....	18.00
27. West Amesbury Branch Railroad — State line, Mass., to Newton.....	2.25
28. Wilton Railroad — Nashua to Wilton.....	15.50
29. Wolfeborough Railroad — Wakefield to Wolfeborough.....	12.00
30. Worcester and Nashua Railroad — State line to Nashua.....	6.63
31. Manchester and North Weare Railroad — Manchester to North Weare.....	19.00
32. The Peterborough and Hillsborough Railroad — Peterborough to Hillsborough Bridge.....	19.50
33. Manchester and Keene Railroad — Greenfield to Keene.....	29.55
34. Profile and Franconia Notch Railroad — Franconia to Profile House.....	10.00
35. Whitefield and Jefferson Railroad — Whitefield to Jefferson.....	10.00
Total mileage completed within the limits of the State.....	1,005.09

APPENDIX D.

Names and residences of Railroad Commissioners, commencement of term, and length of service, from the establishment of the board of commissioners in 1844 to 1879, inclusive.

NAMES.	Residences.	Date of appointment.	Length of service in years.	Remarks.
Charles J. Fox.....	Nashville.....	1844	1	The records in relation to the appointments during this period, in the office of the secretary of state, are imperfect, and some of these names and dates are derived from the annual registers. The dates may be slightly incorrect in one or two cases, but they are believed to be correct.
Edmund Elliot.....	Exeter.....	1844	1	
Harry Huntoon.....	Unity.....	1845	1	
Titus Brown.....	Francestown.....	1845	4	
Elijah Currier.....	Newton.....	1845	5	
Samuel Garfield.....	Langdon.....	1846	3	
James W. Weeks.....	Lancaster.....	1849	5	
Asa P. Cate.....	Northfield.....	1849	6	
Stephen W. Dearborn.....	Exeter.....	1851	6	
Benjamin H. Plaisted.....	Jefferson.....	1854	2	
Francis H. Lyford.....	Manchester.....	1855	3	The special commissioners appointed in connection with each road built, or the construction of which was begun, prior to the act of December 26, 1844, are not embraced in this list; nor are those commissioners included who have either before or since the passage of that act been appointed under the provisions of acts providing for the consolidation of railroads of this and adjoining States.
Greenleaf Cumings.....	Lisbon.....	1856	3	
Jeremy O. Nute.....	Farmington.....	1857	3	
Archibald H. Dunlap.....	Nashua.....	1858	3	
Merrill C. Forrest.....	Berlin.....	1859	3	
Jeremiah C. Tilton.....	Sanbornton.....	1861	3	
Jonathan T. P. Hunt.....	Manchester.....	1861	3	
Dixi Crosby.....	Hanover.....	1862	3	
David H. Buffum.....	Somersworth.....	1863	3	
Person C. Cheney.....	Peterborough.....	1864	3	
Milan W. Harris.....	Dublin.....	1865	3	
George D. Savage.....	Alton.....	1866	3	
Jesse Gault.....	Hooksett.....	1867	3	
James W. Johnson.....	Enfield.....	1868	2	
Samuel D. Quarles.....	Ossipee.....	1869	3	
Charles P. Gage.....	Nashua.....	1870	3	
D. W. Buckminster*.....	Keene.....	1870	1	
David Gilchrist.....	Franklin.....	1871	3	
Albert S. Twitchell.....	Gorham.....	1872	3	
Edward P. Hodsdon.....	Dover.....	1873	3	
Alvah W. Sulloway.....	Franklin.....	1874	3	
Charles H. Powers.....	Jaffrey.....	1875	3	
William A. Peirce.....	Portsmouth.....	1876	3	
Granville P. Conn.....	Concord.....	1877		
David E. Willard.....	Orford.....	1878		
James E. French.....	Moultonborough.....	1879		

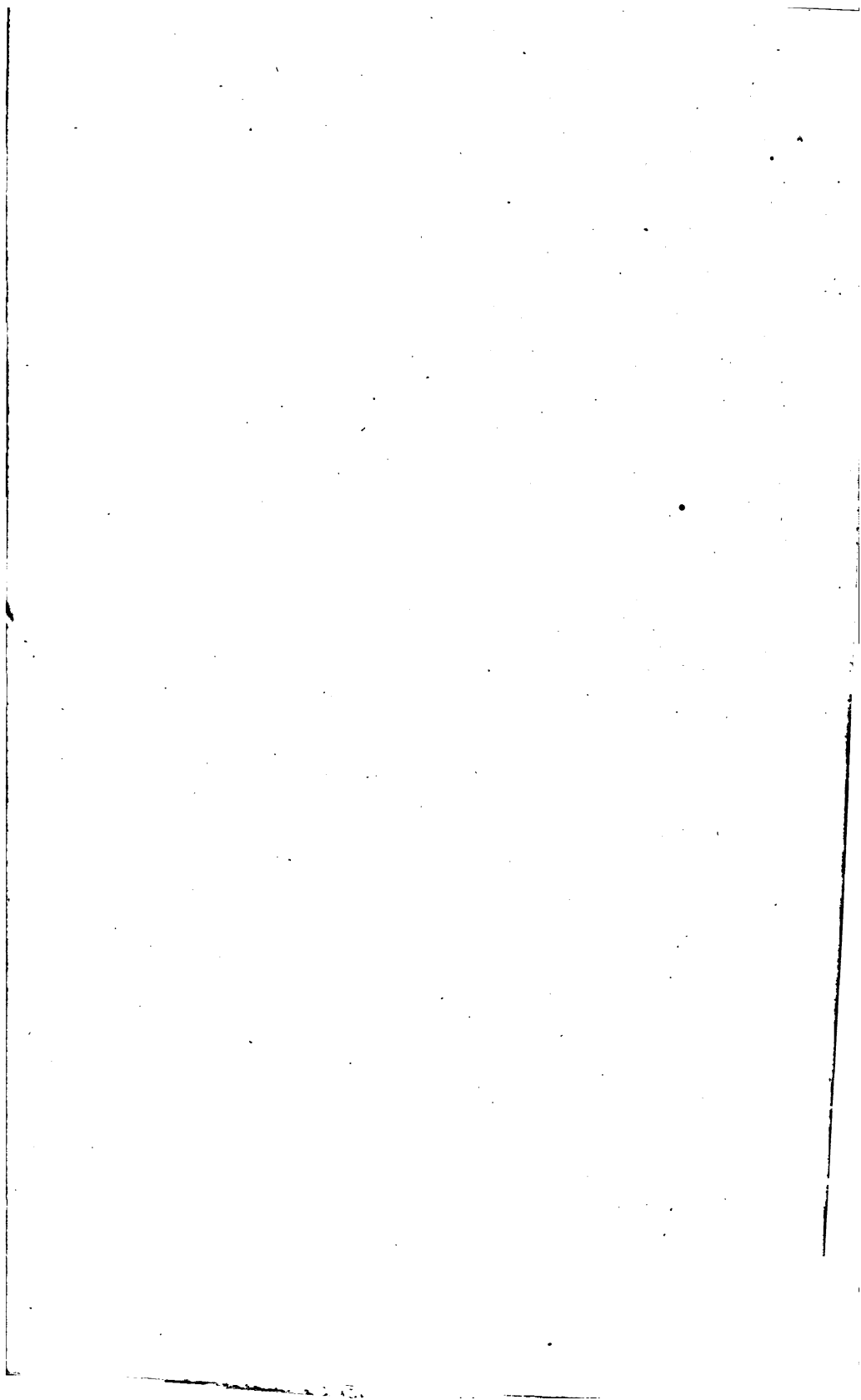
*In place of J. W. Johnson resigned.

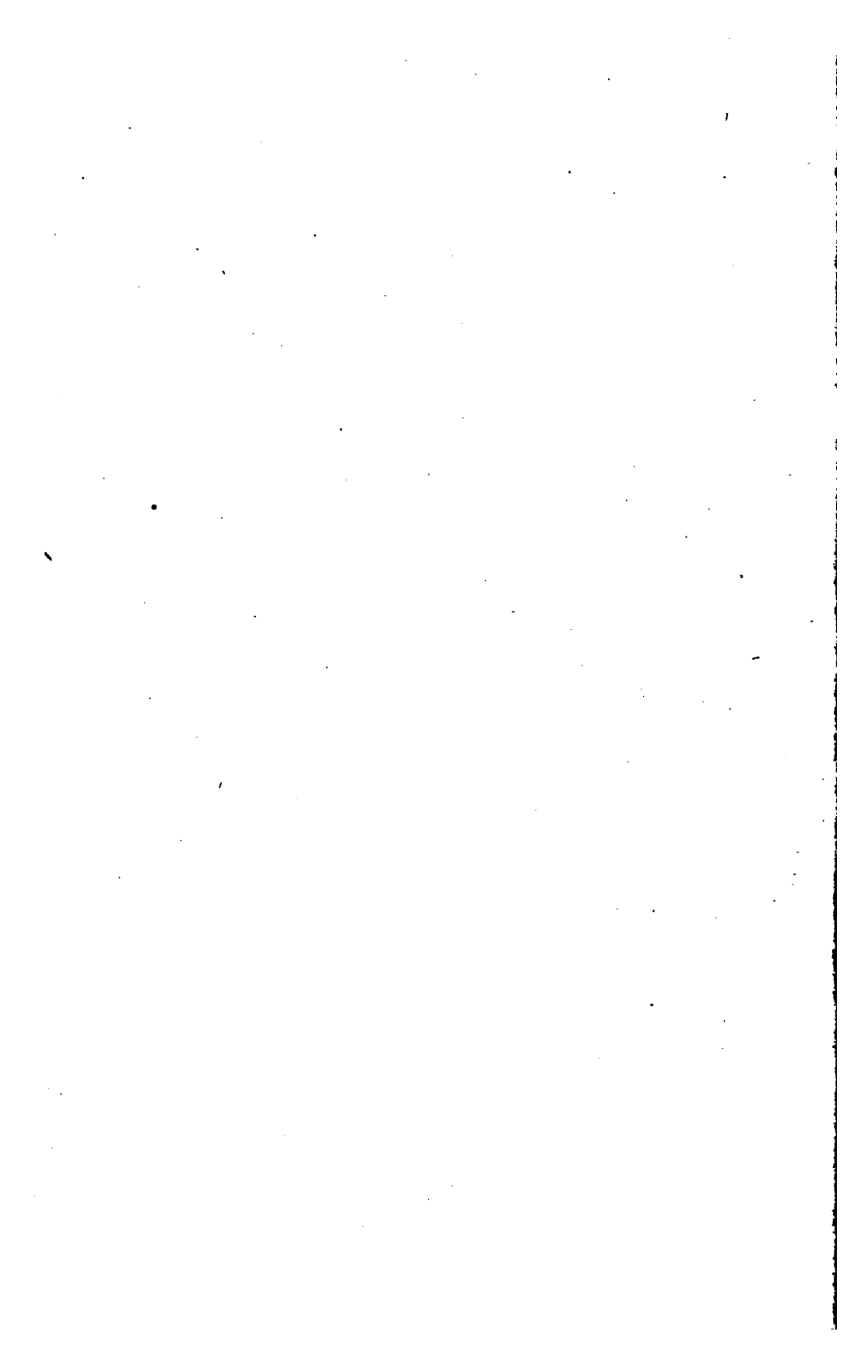
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